

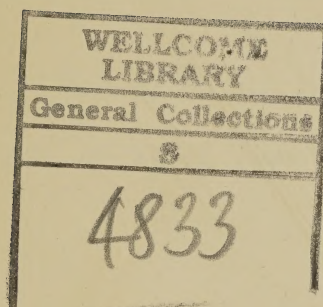
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ERRATA.

Page 8, line 11 from bottom. For " $36\frac{1}{4}$ " read " $21\frac{1}{2}$,"

„ 89. "Nerve - cases without development defect." For
"G. 979," read "G. 978."

JOURNAL
LONDON SCHOOL OF HYGIENE
OF THE ROYAL STATISTICAL SOCIETY,
(DEPT. OF MEDICAL STATISTICS)
MARCH, 1893.

DISTRIBUTION *and* MOVEMENT of the POPULATION in INDIA.

By J. A. BAINES, ESQ., I.C.S. (*Census Commissioner for India*).

[Read before the Royal Statistical Society, 20th December, 1892.

The President, CHARLES BOOTH, ESQ., in the Chair.]

WHEN our immediate past President, Dr. Mouat, did me the honour of suggesting that I should read a paper before you last June, I at first proposed to review generally the results of the late census of India, the main returns for which had just been completed. Luckily, however, for me, political events of greater interest and moment supervened, so that I have been able to give more time to the consideration of the mass of figures collected in the course of the operations. The result is, that instead of attempting to review before you, more or less cursorily, the whole range of the information available, I have restricted my paper to the two subjects of most general importance, the distribution and the movement of the population of India.

In dealing with this subject, I must ask you to take India, not as a whole, but piecemeal. It contains, it is true, only a million and a-half of the 52,000,000 of square miles which, according to the computation of one of our fellow workers in statistics, Mr. Ravenstein, who is on the council of this Society, constitutes the whole land surface of the globe. But, owing to the extraordinary variety of its physical and ethnic conditions, India is not so much a country as a small continent, and as such I propose to consider it in connection with our present subject.

Regarding ethnic variety I have nothing to say at present, but in so far as the physical features of India seem to affect the distribution of its population, I must ask your indulgence for a little geographical disquisition. A glance at the map suffices to indicate the most prominent amongst the characteristics in question. First of all, of course, comes the great mountain barrier of the north, with its flanking ranges running southwards on the east and west. If we look only at the population of the present day, this remarkable frontier concerns us comparatively little, for the census touches

but its skirts, which contain a small fraction only of the inhabitants of India proper. But it is in its historical aspect that we have to regard it, that is, as the obstacle to the overflow into India of the people of countries lying beyond it. If we look at its height, breadth and continuity, it becomes clear that colonisation across it must ever be a matter of time, effected by the passage of small bodies of adventurers through the few and arduous passes that give access to the plains below. These last constitute the second of the main divisions of India. They may be said roughly to comprise the valleys of the two great rivers of Upper India, the Ganges and the Indus, with the lower course of the equally voluminous stream which we know as the Brahmaputra. These would naturally serve as the director of the course of those who had safely penetrated the crevices in the mountain armour, whether from the north-west or the north-east. Colonisation would proceed down the course of the streams, as those who strayed would be brought up by the desert on the one side, and by inhospitable ranges of forest-clad hills on the other, presenting no feature attractive to either a pastoral or an agricultural community. It is this second line of defence, as it may be termed, that bounds the third division of India. Usually, this is taken to include the whole of the peninsula, but I think the circumstances justify greater discrimination. Orographically, for instance, the variety is great, and with the difference above sea level, the climate and vegetation vary, about which I shall have a word or two to say later on. I should therefore divide the plateaux of Central India, and the broken hill country to the east and south-east of them, from the table land of the Deccan, and the strips underlying it along the coasts. The first will thus be bounded by an irregular line from the Gangetic plain, round the Aravalli and the southern face of the Satpuras to the Orissa Hills, where they drop down to the Godavari. This rough demarcation leaves the plains of Khandesh, Berar, and the Central Provinces between the above hill country and the Deccan. This last is characterised, first by its more or less abrupt descent on the east and west, and again, by its general inclination from north-west to south-east. Between it and the coast, on the east, lies a strip of lowish land, connected on the north, through Orissa, with the Ganges delta, and spreading out on the south over nearly the whole point of the peninsula. The corresponding strip on the west coast is of an entirely different character, and, including the detached hills of the extreme south-west, stretches northward to where it widens out into a tract connected with the great river systems of Upper India.

As for Burma, it is enough for our present purposes to recognize the two political divisions, which coincide fairly well

with the distinction between the littoral and deltaic country and that sheltered by the western ranges of the province. The northern portion forms, no doubt, a hill tract distinct from the rest, but our information regarding it is by no means complete, and the population is not included in our census.

I have now to touch, but as shortly as possible, on the climatic variations of India. It may be thought that these are but very distantly connected with my immediate subject, but I will ask you to allow me the privilege of counsel—I mean, to introduce matter *primâ facie* irrelevant, on undertaking to show later on that it is not so. My reason, in short, for entering on this matter at all is that we find from the returns that in India about two-thirds of the population live by agriculture, so that the relative fertility and similar natural advantages of different tracts are factors of the utmost importance in the distribution and movement of the people. I will mention, however, the rainfall only, both because that is the most distinctive element, and because, too, it is the one of which we have the fullest record. I have by me the averages of rainy days, of relative humidity, of temperature range, and so on, for the principal meteorological stations only, which are not always those most characteristic of the country round them. But the rainfall has been recorded for many years past at a great number of stations in both British and feudatory territory, and has been carefully analysed by specialists at home and abroad.

One of these, and perhaps the best qualified to form an opinion on the question, has stated that, though the average fall of India, as a whole—which, I may mention, is 42 inches—does not differ very much from the general average of the tropical zone, the extreme variations within the limits we have above defined, and excluding Burma, for which the information is at present defective, are such as are without parallel in any other country in the world. I am quite aware that pre-eminence in this respect has been claimed for the British Isles, but I doubt if even this favoured spot can show a fall of 600 inches in one place and one of less than 5 inches in another, as we can in India north of the tropics. Again, it has been established by observations that this remarkable variability is not merely local but periodical, and that, unfortunately, the difference between year and year, or what we may call the uncertainty of the season, varies inversely as the quantity of the fall, so that it is at its maximum in the tracts where the fall is lightest, and the season is most assured where there is so much rain on an average that a good deal more or less would make scarcely any difference in the harvest. At this point we can establish the link between the climatic subdivision of the country and the geographical, as I have above described it, since the latter determines to a very

great extent the distribution of the rainfall with which we are now dealing.

In India, I need not remind you, the latter is periodic or seasonal, though the rainy periods differ in different tracts. I may omit notice of the comparatively restricted action of the winter rain in the Panjab and its neighbourhood, and of the spring storms of the east and south-east of the peninsula, since even in the tracts named, their effect is little, compared with that of other factors, in the exploitation of the soil. The seasons to which the cultivator in the greater part of India looks for his existence are the summer and autumn. I will indicate the influence of these two as concisely as I can. The summer rain spends its greatest force on the west coast, passing towards the north-east, with much diminished volume, across the western portion of the plateau of Central India and the plains between that system and the Deccan. It will be seen that the high line of mountains that support the latter on the west lie athwart the line of direction, and prevent most of the fall from passing over into the plain, which, in its turn, is inclined, as I have before remarked, away from the coast. Thus, whilst there is a fall of over 140 inches below, or up to the crest of the range, the country twenty miles inland receives no more than about 30, an amount which diminishes to 20 in the centre of the Deccan. There is a second branch of the south-west rainy current which extends up the Bay of Bengal to Assam. It is then deflected in diminished vigour to the westwards by the Himalayas, and meets the current which has passed, as above described, along Western India. The upper line of the resultant is weak, but the lower tends to make the fall certain, if not copious, throughout the hill country of west Bengal and the south of the Central Provinces, a tract included in the third of the subdivisions I have above adopted. I should add that the progress of the south-west current northward of Rajputana is deflected, and in seasons when it is weak, put an end to by strong dry currents from the north-west, which keep it off the plains of the lower Panjab and upper Sindh, where is found, accordingly, the minimum rainfall of India. Before the south-west wind has done blowing, the eastern portions of the peninsula, which have hitherto received no rain from the other side of the Ghats, begin to be favoured; for what is called the north-east monsoon sets in upon the upper portion of the coast, and brings the rain with it as far as the centre of the Deccan, as well as across the southern point of India. It is here, in the meeting zone of the two currents, and in the corresponding zone in Upper India, that the maximum of uncertainty is found, and a weak current in either direction produces results disastrous to the cultivating population. On the other hand, Bengal and

Assam, getting a full current twice a year, may be said to be never dry.

I will now summarise what has been said above, with the object of showing how the two parallel systems on which the country has been subdivided bear directly on the question of population. Passing by the mountain frontier, we have a series of tracts peopled by communities mainly depending for their life and growth on the cultivation of the soil. Amongst these tracts we have plains drained by large rivers with a certain rainfall; others of equal fertility, but more liable to diversities of season, and one which is either desert or at best dependent for its arable capabilities on artificial means. Next come the table lands, still more liable to deficient rainfall, and with soil accordingly, which yields less return to tillage. In area, the hill tracts are the next, where, though the rain is usually abundant and regular, the nature of the country restricts agriculture to a comparatively small proportion of the surface; and the profits of cultivation compete with those of forest produce. Last come the strips of land along the coasts, which vary greatly in character, but on the whole must be classed as amongst the fertile; and the specially situated tract towards the south of the peninsula, in which the soil is bountiful but the rain capricious.

A population spread over such a variety of conditions, then, cannot be treated statistically as a whole. The "millions of India" is a good phrase, no doubt, for a magazine article or the platform, and those who wish to conjure with it will find a satisfying supply of nine digit numbers at the foot of the returns I have just printed, and a copy of which I hope to have the pleasure of presenting shortly to our library. The detail of the above returns is by political, not physical, divisions, whilst the report and tables of the local enumeration, which are summarised in the general returns, are by administrative divisions, that is by districts or States. As I shall have to introduce these artificial divisions when dealing with the figures of the census, it is perhaps convenient to include a brief mention of them in my present dissection of India.

Politically, we divide India into the British Provinces and the Feudatory, or Native, States. The former are under direct administration as part of the British dominions; the latter form part of the empire, but under the dominion of the respective chiefs, who hold from the Queen-Empress as Lord Paramount. The respective proportion of the populations of the two to the total, are 77 per cent. of the former and 23 of the other. More than half the population of India, I may remark, is contained in the three provinces of Bengal, Madras and the North-West Provinces

with Oudh. The first portion of this last now unmeaning title refers back, I may mention, to the time when the Panjab was not included in British India. The latter province now shows over 7 per cent. of the population, and Bombay with Sindh, $6\frac{1}{2}$. Next in rank come the State of Haidrabad and the large collection of States known collectively as the Rajputana Agency. The Central Provinces, and its neighbour, the Central India Agency, with Burma, close the list of the main divisions in this category. With the rest I will not trouble you.

The unit of administration, which is the last of the divisions that enter into the scope of my subject, is the State or the district, according to the political standing of the territory of which it forms a part. The term State is very comprehensive, as it includes anything from Haidrabad, with its 11 or 12,000,000 of inhabitants, down to the chieftainship of a few villages, containing not so many score. The smallest, however, is invested with a dignity far above that of the largest and most productive estate held from the British on a non-diplomatic basis. I will only add that for convenience of supervision, the smaller States are combined under single agencies, which have been taken as the unit for the purpose of census. The four largest, Haidrabad, Baroda, Mysore, and Kashmer, will be found individually mentioned in all the returns.

Under British administration the district is a unit of better definition. Though it varies in size in every province, according to the nature of the country or the system of land administration, the functions and responsibilities of the officer at the head thereof are the same, or nearly so. He is, I have heard, next to the Viceroy, the most important functionary in the country, and I am the more inclined to endorse this view, because it is practically he that takes the census, or, at all events, it rests with him whether it is well or ill taken. I have further to add, whilst I am on the subject of districts, that owing to this institution, with its concomitant land record, we are in little or no difficulty in India, except in Bengal, regarding the areas and boundaries of the various territorial subdivisions, which in England, I am informed by Dr. Ogle, constitute one of the main troubles and causes of delay in preparing the returns of the census. In Bengal, it is true, we meet with this difficulty, because in that province there is not any detailed survey of district areas as in the rest; nor, again, do the outlets of the great rivers, which are always shifting, allow of permanent boundaries in the deltaic districts. We have in India altogether 246 districts, including those of hill tracts and on the frontiers. The average area of a district is just under 4,000 square miles, with a population of a little less than 900,000. This, as I have just remarked, is in the hands of one man, for good or

evil, as he may use it. Taking both area and population together, the heaviest charge is to be found in Madras, where it contains 6,700 miles and 1,675,000 inhabitants. The lightest is in Berar, with 2,950 miles and 483,000 inhabitants. In Bengal the population is, on the average, more than $1\frac{1}{2}$ millions, but the area is only 3,220 miles. The Oudh district contains over a million, but on an area of little over 2,000 miles. On the other hand, in Sindh the conditions are reversed, and we see 9,560 miles to a district, inhabited by only 574,000 people; and in Burma, too, the area is far in advance of the inhabitants, when compared with the general average.

At the risk of being thought by some of you, especially those who know India as well as, perhaps even better than, I do, to be giving an intolerable deal of description to the ha'porth of the dry bread of statistics they were led to expect, I will conclude this part of my subject by throwing in a few figures of comparison between India, as politically subdivided, and countries nearer home, or more familiar to the majority of us. With the population as a whole, which is about $287\frac{1}{2}$ millions, we have nothing to compare. The nearest we can get, amongst the populations that have been regularly enumerated, is the United States of America, which, with Mexico, returns a population a trifle more numerous than that of the British portion of Bengal. We have then the German Empire, which contains, according to the last census, about the same number of people as the North-West Provinces and Oudh, with the two small States attached to that government. France furnishes a fair parallel to Madras with its satellites Travancore and Cochin. The inhabitants of Spain, Portugal, and Greece could be conveniently accommodated in the Panjab or Bombay, with their respective feudatory territory. Assam pairs off with Bavaria, Berar with Switzerland, with which, too, we should place our latest acquisition, Upper Burma. The population of Lower Burma would all but replace that of the detached unit of our at present United Kingdom, when, or if, the Irish desert us. The whole population of the vast country of Brazil is exceeded in number by that of the Central Provinces, one of the least developed of the tracts under British administration. For the larger native States I can find no near parallel. The two largest, Haidrabad and Rajputana, are together equal in population to Austria. Mysore is a trifle above Sweden or Holland, and Baroda and Kashmer are each somewhat more populous than Denmark, or the South American Republics of Peru and Chile. Further into this detail it is unnecessary to enter.

Now, the general total, though it may lead to no fruitful deductions, is useful in furnishing us with a means by which we

may appreciate the many local variations that occur throughout the country. Thus, the specific population calculated from it amounts to 184 persons per square mile, a density that is typical of but a minute portion of the whole area. I will first then slice it into the corresponding figures for British territory and that under native rule. The former shows a density of 230, and the latter of 111 only, since the States include the greater portion of the desert, the hill country of Central India, and the mountain tracts of Kashmer. I propose to mainly comment on the provinces, or British territories. Here it will be found that the mean density of 230, allowing a margin of 10 per cent. above and below respectively, is applicable to about $6\frac{3}{4}$ per cent. of both area and population. Ignoring fractions, 70 per cent. of the population is found more thickly congregated, and 30 more sparse. Conversely, nearly two-thirds of the area lie below our mean, and a little more than one-third above it. Going further from it, we have 37 per cent. of the area supporting a density less than one-half that of the mean, or only 9 per cent. of the population. Crossing the line to the corresponding point in the opposite direction, the proportion of the area on which more than 460 persons live per square mile, is found to be $16\frac{3}{4}$ per cent., whilst the population is 45 per cent. of the total number. I may as well mention here, to avoid misconception, that throughout these deductions, the area and population of the small detached territory, such as Aden, Quettah and the Andamans, and also those of the four large cities, have been left out of consideration. But even without these, there are many areas where the density far exceeds the double of the mean. In Europe, it may be noted, we find three countries with a density of about 500—600. England and Wales return about 498, Saxony, 598, and Belgium, 534; and all these are, we must remember, distinguished for the extent of their manufacturing industries. Against the $38\frac{1}{2}$ millions contained in the above three countries, we have in India, to set nearly 47 million people living in the proportion of 600 to the square mile and over, and more than $36\frac{1}{4}$ millions of them are packed to the extent of 800, or one-and-a-quarter persons per acre. The last group is found in two divisions, one of which is exclusively agricultural in its character, the other very nearly so. The latter is in Eastern Bengal, including, however, a tract probably to some extent within the influence of Calcutta. The other lies along the Goghra river, to the east of the North-West Provinces and Oudh, and includes a portion of both those provinces and of Bihar. An Irish poet, you will recollect, no doubt, heaved a sigh over the times gone by, when every rood of ground maintained its man “of a bold peasantry, “its country’s pride;” but this density was never, so far as I am

aware, achieved by an agricultural community outside Auburn. Four-fifths of an acre per head of standing room is close enough I should think for the rest.

But this extraordinary pressure on the land is, as I have pointed out, purely local, and does not affect more than one-sixth of the population with which we are dealing. There is this, too, to be considered, that the tracts in question lie, the one entirely, the other very nearly, within the zone which I have described above as that of certain rainfall, or as certain as that factor in the well-being of the community is likely to be in the tropics, so that relatively to other and less fortunately situated tracts, these congested districts may be, if not lightly, at least not excessively burdened. The main crop there is rice, not only the most prolific of the cereals, but that which is most responsive to the minute care in cultivation which is available with so many hands depending upon it. Besides, in the deltaic tracts there is a large fishing industry, and though the old notion that a fishing population is always highly prolific may be exploded, there is no reason to doubt the efficiency of the occupation in supplementing the food stock of those who are already in the world to take advantage of it. In the north-westerly group, again, where fishing is not a general calling, we have special branches of agriculture of a highly remunerative nature in great vigour. Indigo plantations in some parts, opium in others, and tobacco in most, afford a pleasant and profitable variation from the ordinary routine of pulse and cereals. Finally, in the first group of these districts there is no famine record at all, and in the more northerly group the last scarcity was in 1865, on one side of the river, and in 1874 to the eastwards; and as the normal cycle of non-famine years is said only to extend to about a dozen, we must not deny to this tract the title of fortunate. I will now take another illustration of the insufficiency of the evidence afforded by the density of population alone as to the material condition of the tract. The northern portion of the strip of coast land between the Ghats and the Indian Ocean is a good instance. Here, as I have pointed out, the rainfall is heavy and regular, and the temperature and relative humidity the same as in the Bengal delta. But, in place of an alluvial plain, we have here a broken country, where the soil lodges only in depressions between ridges of basalt rock. Instead of two rainy seasons, the whole fall of the year is precipitated in three months. There are no large fields of rice, as on the other side of India, but a coarse variety of this grain is extensively cultivated in small patches, whilst the sides of the hills are terraced out into beds of a light millet almost wherever there is room for a hoe to be worked. The harvest, therefore, is over with

the rain, and there is little or no second or winter crop. The density of population here is about 250 persons per mile, and in the district where it rises to 280, there is little doubt that the pressure is more severe than in the tracts we considered above, with their 790. I pass on to a wider tract, in which the conditions are very different, but the inference to be drawn is much the same. In the east Deccan and the portions of the Madras plains that lie along and below the eastern edge of the plateau, we find the maximum of seasonal uncertainty with a comparatively narrow field of occupation. This tract lies at the extreme edge of the two main currents of rain-bearing wind, so that a very slight weakness in either, which may not even be felt in the centre of its course, narrows the latter to such an extent as to deprive the unfortunate outskirts of the requisite minimum fall on which their sowings depend. The winter rain, again, is still more scanty, and the best soil—which is, I may say, very good—is of a sort in which water is found only at a very great depth, so that well-irrigation is beyond the reach of those who are not able to undertake the expense of deep borings. The bulk of the soil, however, is of a light description, mainly dependent on the rainfall, and often not rich enough for second cropping, though the practice of well sinking is rapidly increasing, under State aid and encouragement. The mean density varies between 150 in the north and 122 in the south-east of the tract, and probably the pressure thus indicated is not far from equivalent to that of four times the number on the soil of the lower Gangetic plain.

I turn now to a more pleasant state of things, where circumstances are far less hard for the masses. The plains of the Central Provinces, for instance, with their continuation along the Tapti valley, show a density of about 160, and except at the western extremity of the tract, the mean rate for India is never reached. It is for the most part within a zone of regular rainfall, but as the country is one of the latest acquisitions in India proper, its development is as yet little, so to speak, beyond infancy, so that the pressure on the land is comparatively very light. In Khandesh and parts of Berar, where there was the great stimulus of the cotton trade to attract settlers, as well as to increase the prosperity of the former inhabitants, the margin of cultivation has, of course, risen, but still the room for expansion is considerable. Take Assam, again. This province is divided into three distinct portions, far more clearly defined than in most of the Indian areas of the size. The southern valley, that of the Surma, is practically a part of lower Bengal, and presents all the characteristics of the latter province. If it be excluded, the specific population of Assam, which, as a whole, reaches 112, will be reduced to 76 per square mile. The second, and

most important division is that of the Brahmaputra valley, or Assam proper. Here the highest district density is but 173 as compared with nearly 400 in Sylhet, across the central ridge between the two valleys. In spite of the immigration to the tea estates, the pressure gradually decreases as we approach the eastern frontier, and tends to fall to the level of that found in the third division—the hill tracts, where the distribution is irregular, depending as it does on fortuitous circumstances affecting the wild tribes that at present are the chief, or, in part, the only inhabitants. With its certain rainfall and great river system, Assam has never known famine, though its climate is not very favourable to the foreign immigration for which there is still scope. Passing northwards we find in the Panjab an average density of 188 per square mile, composed of very various elements. The great plains of the south-west, for instance, with no more than 60 or 70 to the mile, may be, and in parts really are, as densely populated relatively to the means of subsistence as the sub-montane tracts with from 600 to 700, for the greater portion of their area is dependent entirely on the introduction of means of irrigation for its colonisation. Where such means exist there is little hesitation on the part of the neighbouring population in taking advantage of them. I may mention that a very important new system of canals has recently been taken in hand, and the first distribution of lands that come within the area of its influence is a task which was entrusted to the officer who was in charge of the census operations of the province, Mr. Maclagan, of the Civil Service. As for the rest of the Panjab, it appears that there is only a tract along the base of the line of hills forming the outworks of the Himalayas in which any marked congestion of the population has taken place up to the present time; and as the area only awaiting facilities for irrigation to be occupied is very large, and the irrigation itself is from snow-fed rivers, and thus more certain than in most of the rest of India, the pressure may be said to be insignificant. With the Panjab we naturally take Sindh, since the great feature of both is the “Father of Rivers,” as the Indus is called by the reverential amongst the population which depends upon it. In the lower part of its course it plays the part of the Nile, which it resembles too in its independence of tributaries after it has left the land of the Five Rivers. Sindh, like Egypt, is practically rainless, except for the casual charity of the last moments of the dying monsoon, which benefits the delta. The inundation, with its extension by means of canals, is what maintains the country throughout the valley proper, leaving only the higher ground on the edge of the desert to depend on rain. It is obvious, therefore, that so long as the canal system is efficient there need be no question of undue

pressure of population, as the density, which averages only 60 per mile, varies from 23 in the eastern or unirrigated portion to less than 100 in the rich district of Shikárpur, and reaches only 101 at its maximum, in Haidrabad.

In the North-West Provinces we find a high average density, but considerable local variety. Beginning with the Himalayan tracts of Kumaon and British Garhwál, where there are only from 60 to 80 persons to the square mile, there are but seven districts out of forty-nine with a density below the average of British India. Of these last, those that are not in or immediately below the northern range are situated in the hilly country that confines the province on the south and south-west. The next group is situated in the west, between the Jamna and the Ganges, and though the average density is here more than 400, special circumstances tend to raise the pressure, relatively to the capabilities of the soil, to nearly that of the twenty-nine more fortunate districts to the east and in the centre of the plain, where a population of 600 per square mile lives and thrives. Taking the provinces as a whole, Oudh returns a density of 522, and the rest of 436. In Madras, one portion of which I have already described as amongst the unlucky tracts, the average of 252 persons per mile is far more typical of the whole than that of Upper India. The districts which we may call sparsely populated, taking the density as absolute and not in relation to the fertility of the tract, are but five, with four others just below the general mean of 230. In the other direction, too, the divergence is equally small, as there are only two in the category of thickly peopled districts. One of these is situated in the Cauveri delta, where there is a good system of rice irrigation by canals. The other is along the western coast, where the full force of the south-west current is received, so that the return of the soil is nearly certain. On the whole, the thinly peopled tracts may be said to be confined to the north of the province, and the denser to the south. The last tract on which I have to comment is that included in the two main divisions of Burma, where the term density, apart from its relative sense, is scarcely applicable. The highest rate is about 180 per square mile, and in eleven of the thirty-five districts amounts to less than 23. Some of these are mainly hill tracts, occupied by wild tribes, whose standard of living is not very exacting on the soil. Elsewhere reclamation from forest or swamp is in progress as the population expands, and in none, even in the delta of the Irrawaddi, where the greatest density is to be found, is there at present any symptom of congestion. Nor in a rice-growing country, with an average population of 35 per square mile in Upper Burma and of 53 in the rest of the province, is any to be expected for some time to come.

With the specific population of the native States I may deal more summarily. The highest pressure is found in the two States that bound the Malabar coast on the south, Travancore and Cochin, where it nearly reaches 400 per mile. The actual density along the coast must be far higher, as the State of Travancore contains a considerable area of hill and forest, with a very sparse population, as is the case with the neighbouring British district. In both cases, however, the climatic and other natural advantages of the tract are sufficient to enable the produce to keep pace, at all events up to the present time, with the population, and there is little complaint of congestion. We then come, *longo intervallo*, to Baroda, with its 290 to the mile. This State is a part of the most fertile portion of the west of India, and in a good deal of the British territory surrounding it we find a density of over 500. In no other large State or collection of States does the average density reach 184, or the mean for India, though that figure is of course surpassed in many smaller areas under the rule of the chiefs of the country. But, as I have had occasion to remark before, it is brought down by the western portions of Rajputana, with a density, if I may use the term, of 7 per mile in Jesalmér, by the 30 in Kashmer, the 70 in the hilly little States of the Central Provinces, with but little more in the like areas under the Government of Bengal and in the hill and desert States of the Panjab. In the two large States of Haidrabad and Mysore we find an average population of 140 and 177 per mile respectively. A considerable portion of both falls within the zone of uncertain rainfall, and Mysore especially has not yet quite recovered the loss of population resulting from the prolonged scarcity of 1876-77, which affected all but the western edge of the State.

There is one more topic connected with the distribution of the population on which I must dwell before passing on to the other branch of my subject, and that is, the tendency of the people to congregate in towns. This tendency, it will have been gathered from what I have said regarding the agricultural propensities of the inhabitants of India, is remarkably weak. The village communities, which are amongst the distinctive features of social organisation throughout nearly the whole of India, contain all the trade and industry that is required to supply the very simple wants of a peasant. In the north-west corner alone does there seem to have been any tendency amongst the rural population to form larger groups, for the purpose of mutual defence against the incursions of foreigners from across the frontier. It is not surprising then to find that the proportion of the dwellers in towns is but $9\frac{1}{2}$ per cent. of the total population. Even this, on examination, dwindles in importance considerably. For the term

town is scarcely more uniformly applied in India than it is in the United Kingdom, and has been largely extended within the last decade or so, by the elevation to the rank of municipalities of numbers of small market centres, which, but for a weekly concourse of grain and piece goods dealers, would be undistinguishable from their neighbours. On the other hand, it would be equally fallacious, looking at the great variety in the relative densities of population with which we have to deal, to adopt any hard and fast population standard, since the average number of inhabitants per village in some tracts may be nearly double that in another, so that the distinction between town and country would be still fainter than at present. Our definition of a town, accordingly, admits of the inclusion under that designation of all places on which a municipal constitution has been conferred, whatever their size, whilst in other cases the decision of the local authorities is taken, on the general understanding that a population minimum of 5,000 should be as far as possible observed. The returns thus framed give a total number of 2,035 towns, of which however a quarter fall below the minimum, and 1,300 more below 20,000 inhabitants. Thus we find 225 places of 20,000 and over, containing a population, in the aggregate, of 4·8 per cent. of the entire community. I quote this ratio in order to compare it with the corresponding figure for England, where, according to the provisional returns of last year, 53 per cent. of the population live in 182 towns of the above dimensions. This fact indicates how little urban life must count in our appreciation of the conditions of existence in India. In Bombay, the province where the proportion of the town population is highest, the latter is only $19\frac{1}{2}$ per cent., and the next in order is the north-west, with $12\frac{3}{4}$. In Burma the ratio is apparently high, nearly equal, in fact, to that last named, but this anomaly is due to the presence in an otherwise thinly peopled country of two large centres, like Rangoon and Mandalay. In Bengal the rural population swamps the town aggregate, which, in spite of the existence of places like Patna and Dacca, not to mention Calcutta and its wide-spread suburbs, contains altogether only just under 5 per cent. of the population. In Assam this proportion sinks to less than 2 per cent. On the whole, the average in British territory is 9·22. It is thus clear that in the native States the proportion must be higher, and it reaches in fact 10·38. In many cases the analogy of Mandalay helps us to an explanation, for in most States the tendency is for the place of residence of the chief to outgrow the rest of the towns. In the first place, decentralisation was till within the last generation or so a policy avoided by all native administrations, partly from distrust of the delegates who would have to be invested with local

power, partly, no doubt, from the notion that the supreme law was the comfort and glory of the ruler. All talent, therefore, as well as rank, huddled up to the proximity of the throne, and the less favoured places were proportionately starved. There is the further reason epigrammatically stated by, I think, Jacquemont, that in a native State—remember he was writing in 1828—the chief's power varies inversely as the distance from his capital.

The distribution of the village population is far too wide a subject to be treated otherwise than cursorily by me at present. The number of villages on the return is about 715,500, so that, whereas there is an average distance of about 90 miles between towns of 20,000 and over, each village on the same assumption of equal distribution, will find its neighbour just over a mile and a half from it. The mean population of the village of less than 10,000 inhabitants, a maximum that probably covers the larger rural communities, is 370 people, or 380, if we take the British provinces only. The extremes vary from 170 in the village of the Bengal States, or the 200 of that in the adjacent States under the Central Provinces, to 700 in Baroda, parts of the Panjab and Sindh. In British territory the averages are lowest in Bengal and Burma, where the village communal system, as it is organised in most of the rest of India, is unknown, and the population collects itself casually, according to the convenience of cultivation or other pursuits. Again, in the other extremity of the country, along the south-west coast, the village unit in the organisation of the rural tracts is equally wanting, and the agricultural population is found in detached homesteads or farms, comprising both the landholders and their farm servants and labourers. The typical village system is to be seen at its fullest development in the Deccan and in the Central and North West Provinces, where the community generally averages about 600 members in the first case, about half that in the second, and about 500 in the other. I have mentioned the important place the village occupies in the economical distribution of the population, and I can only add that in the localities where it is probably of the oldest constitution its influence on social intercourse is no less marked. Of the place it occupies in the revenue administration of the country it is not my place to speak here, though without the co-operation of the village accountant, I must admit our statistical information about India would be grievously circumscribed. Births, deaths, and the census are all within his province in addition to his more special functions in connection with the record of cultivation, assessments, and transfers of land, &c. A demand for information on any one of these and even more various topics, rolls down from the seat of Government over the three steps of the district officer, his

assistant and the sub-divisional officer, till it falls on the village accountant, who duly provides the *data* required, which are hoisted back by the same route, losing at each stage, I fear, some of their picturesqueness and originality.

With the village I must leave the subject of the distribution, and enter upon the second part of what I have to deal with, the movement of the population. To mark this by periodic record is, I need hardly say, perhaps the most important service that can be rendered by a census, and even in England, where the registration of births and deaths is so carefully supervised, and such detailed returns are collected of emigration, the results of the last enumeration show us that the corrective of a decennial, some say a quinquennial, census is necessary. In India the practice of registration of domestic occurrences of the above description is comparatively in its infancy. Where the village staff is well manned, and the country is flat, with the villages close together, and communication easy, the results for the year are, on the whole, very fairly accurate, as was proved by the return at the census for such tracts. But where, as in parts of Bengal, there is either little registration at all, or that duty is left to the casual attentions of an overworked police officer, comment is unnecessary. Again, in most of the wilder hill tracts, the only person who can read or write connected with the village is usually non-resident, and in his frequent absences, the register is kept by knots made in a bit of string. But in spite of these irregularities, the returns have their use, in providing a means of comparison of one year with another, even though they may afford no evidence of the rates of birth or death.

In dealing with the actual figures of increase in the ten years with which we are concerned, it is a picturesque way of putting it to say that the nett addition to the population of India during that period is equivalent to the whole population of Italy, or nearly to that of England and Wales at last year's census. Or, again, that British India has grown by an amount equal to the population of Spain and Denmark taken together, whilst the States have added to themselves that of Portugal and Holland. But if we look at the above indicated increase relatively, it will be found that the rate is but that of normal growth in a healthy community. In British territory, for instance, the percentage of increase is but $9\frac{3}{4}$. In the native States the rate is $15\frac{1}{2}$, but, as I hope to show later, this must be taken with some qualification. On the whole the rate of 11 per cent., or about 104 in every 10,000 yearly, cannot be called excessively rapid. I may remind you that the decade has been one of, on the whole, normal prosperity, whereas that preceding it was characterised by two seasons of famine, the last of which was

remarkable for both its duration and its wide extent. In other directions too there is evidence that the tendency has been in some degree towards territorial expansion, not simply the piling of additional families on land already heavily weighted. Taking British territory alone, and excluding, as before, the four great seaport towns, we find a more or less regular tendency for the rate of increase to diminish in proportion as the density of population increases. For instance, the tracts with a population of less than 23 to the square mile, have increased by over 25 per cent., whilst those at the opposite end of the table, with more than one person per acre, show an increase of only $7\frac{3}{4}$ per cent. Taking a more comprehensive grouping, the rate of growth in the tracts which have a density of not more than half the mean of 230 to the square mile, is returned at $13\frac{2}{3}$ per cent. In the parts of the country which have now a density of from 230 to 460 per mile, the expansion has been only at the rate of 10 per cent. In the still thicker densities, including those just mentioned, and which contain, I may remind you, nearly one half the population, the increase shown is at the rate of 7 per cent. only. The apparent anomaly of the very densest localities showing a trifling advance on this rate is accounted for by special circumstances, some of the more important of which I have already mentioned, such as the opening out of land in the sub-montane districts of eastern Oudh and its neighbour, and the increased inclination of the business population of Calcutta to avoid the metropolis and reside, as the corresponding class does in our own capital, in the more or less distant suburbs. In the class of tracts immediately below these in the scale of density, the opportunities for other than agricultural pursuits are absent, whilst most of the arable land is already in occupation. It is these tracts that are perhaps as badly off as the less peopled regions of uncertain rainfall, further south, but they have increased, nevertheless, by more than 6 per cent. in the decade.

Time will not allow me to enter more fully into the variations found in these general groups, before I pass on to the less abstract division into Provinces and States, with the general features of which as regards density I have already made you acquainted. I will ask you to bear in mind the several factors that mainly contribute to variation in population. The primary influence, of course, is the natural one, or the ratio between births and deaths. We have then the special action of famine and epidemic disease. Migration follows; and lastly the varying accuracy of the enumeration. I am happy to say we are able to leave out war, on this occasion, as an element in the reduction of the population. On the first I have little to say, because I have no figures at present to support my deductions. There is no doubt, however, that the

rates of both birth and death are much higher in India than in England. In the larger portion of the community, marriage is a religious duty for every man, whilst an unmarried woman is held to be a disgrace and standing reproach to her family. There is thus a struggle amongst orthodox Hindus of the settled tracts to get their children married as early as possible, so that the generations succeed each other with a rapidity rather astounding to us of more temperate latitudes. As a set off against the prevalence of marriage, we have the enormous loss of life amongst child-mothers and their infants, owing to the operation of the early marriage system, and in the best of circumstances the population does not seem to be long lived.

The action of famine, though it has luckily been in abeyance during the ten years which I am reviewing, has impressed its mark very strongly on the returns, owing to its prevalence a few years previously. It makes itself felt in more than one way. In addition to the actual losses, which occur amongst those at the extremes of life, especially males, to a greater extent, I believe, than in the prime, it has the effect of seriously reducing the reproductive power of the population affected for a year or two after circumstances have returned to their normal level. It leads, lastly, to a certain amount of migration, but I am not prepared to say at present, judging from the returns, that this movement is as a rule permanent.

Epidemics, as a check on population, are always to be expected in India. In addition to outbreaks of cholera and small-pox, special tracts are found to be sometimes affected by various sorts of more or less malarial influences, which we laymen are contented to call fever, though it is probably quite different from the common or aguish type of that infliction. I may mention amongst well known instances of these local outbreaks, the Bardwan fever, affecting large tracts in Central Bengal. The epidemic, which puzzled the provincial medical men in Assam for some years, known as the "black sickness" (*kāla azār*),¹ has destroyed thousands along the Brahmaputra, and a portion of the sub-montane tract of Rohilkhand, in the North-West Provinces, has been affected in much the same way as Bardwan and its neighbours. Amritsar, in the Panjab, was subject to a similar experience, if I recollect rightly, in the early part of the present decade. With regard to cholera, there is nothing in the returns to indicate general decrease in its results. The annual fluctuations seem almost rhythmical, and all that we know about it for certain is its uncertainty. With small-pox, I believe, it has been ascertained that even if the frequency

¹ *Anchylostomiasis*.

of its outbreaks is not less, the virulence of the disease has been much mitigated, both as to mortality and the loss of sight.

Migration, as a factor in the movement of the population, cannot be considered of more than local importance. If we look upon the census as a photograph of the distribution of the population at a given time, and this is the true light in which to view it, it will appear that Assam and Lower Burma are the only provinces receiving immigrants in an appreciable number. In Assam we find that $8\frac{1}{2}$ per cent. of the population, and 13 of that of Burma, were born in remote parts of India. It is well known too, that a considerable number of people leave the Madras coast every year for Ceylon and the Straits Settlements. But neither the census nor any other returns completely indicate the nature of the movement, and it is probable that as is the case between Madras and Ceylon, so it is with Assam and Bengal, and most of the labourers, who form the bulk of the immigrants, return to their native place on the completion of their term of contract; or, at all events, have the intention of so doing, if the climate spares them. The amount of foreign emigration, that is to the more distant colonies, is insignificant. But from what I have said before with regard to the unequal distribution of the population in India itself, it is clear that there is abundant room for the shifting of masses from any part of the country that may be congested, to tracts that are lying undeveloped for want of population to exploit them. The census returns help us to judge to some extent how far this process is in operation. From the return of birth-place, we see that, taking provinces and native States together, over 90 per cent. of the population was born in the district or State where it was living at the time of the census, whilst 6 per cent. more was born in the territory immediately contiguous to it. This leaves about $3\frac{1}{3}$ per cent. born beyond the above limits, out of whom it appears that $3\frac{1}{5}$ are natives of the more remote parts of India, so that the foreign contingent is to the total but 0·18, and of these again 0·13 are to be credited to the countries immediately abutting on India, with the final result that 4 people in 10,000 were born in other continents. The extent of the movement is, I may add, even less than the above figures imply, for on looking at the proportions of the sexes in the two leading categories, it will be found that there are in the first group, the district-born, 947 females to 1,000 males, but amongst those imported from the neighbouring territories, the corresponding ratio is 1,370. It is plain, therefore, that the latter class consists chiefly of the interchange of wives between contiguous villages, as is the custom all over India, except in Burma and Sindh; perhaps, too, in Assam and

Lower Bengal. We are thus justified, I think, in saying that in India proper, migration actually is what China was supposed to be, a “*quantité négligeable*.” Not but what there is a tendency, fostered by the annually increasing facilities of communication, to seek one’s livelihood elsewhere than in one’s native village, but this inclination is restricted to certain classes or localities, and even there it is weak, and there is in most cases the *animus revertendi*, and little of the true colonising spirit in it. It is mostly found amongst the labouring classes in the east coast districts of Madras, amongst the semi-forest tribes of the hills of Bengal, and also, though to a far less extent, amongst the lower classes in Oudh and the North-West Provinces, with a sprinkling of the higher castes of that part of India, whose tall stature, regard for caste-purity in food, and loud voices, recommend them to the trading classes of the less martial provinces in the capacity of guards and dunning agents.

I have now disposed of all the specified factors in the variation of population, except that of the relative accuracy of the enumeration as compared with that of the preceding census. This is, no doubt, a delicate subject, but on broad lines it may be said to apply to two classes of the population only: first, that inhabiting wild tracts difficult of access, and where the people are naturally suspicious of any process they do not quite see the end of; and, secondly, to the communities in which the seclusion of women is a custom strictly observed and of long standing. As to the rest of the population of the country, the prejudice against a census has, I think, almost entirely disappeared, and the quaint rumours that are started in connection with it are either soon dissipated or receive no real credence. But amongst the hill tribes the operations are looked on with more doubt, and a synchronous enumeration involving a night visit, even were it physically possible in the circumstances of these tracts, would bear with it its own condemnation in the eyes of the community, and be accompanied by the temporary disappearance of the village, or the personal discomfort of the unfortunate enumerator. Such tracts, then, were taken in hand by day wherever the intercourse of the tribes with the plains is known to be scanty or periodical. Being the second census of this class, and no fresh tax or unforeseen calamity having resulted from the first, I believe that the returns were made without reluctance, and though I am not prepared to stake much on their absolute completeness, I am sure that a good deal of the astonishing increase shown in them, for some of the tracts in question, is attributable to the growth more of confidence than of population. There remains the question of the concealment of women. This is a feature of northern and central India rather

than of the south, and seems to have originally accompanied a strong differentiation of the military or ruling element in the community from the masses. It is also predominant where the contact with the invading foreigners of the north-west has been closest and most prolonged. It is accordingly traceable in the census returns most clearly in the Panjab and North-West Provinces, and in Rajputana. In other parts of India the custom seems to have arisen mainly from the usual tendency of wealth to ape rank in the points where it can do so, and in some tracts, too, the habit seems to have been taken over from the Musalman settlers. In both such instances the true feeling that dictated the observance seems to me to be absent, and the existence of the women of the household is admitted, though not allowed to be put to the test of vision. From a census standpoint there is all the difference in the world between these two ways of looking at the Zanana question. In the first case we have absolute reticence as to the females of the household, in the other a full return about them is given on the understanding that they are not called upon to present themselves before any outsider. This is a point that will have to be treated in much more detail than I am able to discuss now, when I need only mention that so far as the returns are before me, there is a tendency, in the tracts I have specified, for the proportion of females to males to be less as the caste is higher in rank, and I am not at present aware of any marked difference in the other social customs of the communities in question to account for a real deficiency of the fair sex, though of course I am not prepared to say there is none. In concluding my remarks on the probable accuracy of the enumeration, I will only add that we may fairly set off the fictitious increase amongst the forest tribes, in partial though not complete compensation for the admitted deficiency of females in other parts of the country.

In the light of the above general causes of variation, I will now briefly run over the actual return for the main political divisions of the country. Lower Burma heads the list with an increase of nearly 25 per cent. Of this only a little above $2\frac{1}{2}$ per cent. can be assigned to immigration, in spite of the small but continuous flow from Madras. The rest is due in the main to agricultural expansion, with a slight increase of accuracy in the counting of women in the outlying tracts. The next in order of relative increase is Sindh, which shows a population greater than in 1881 by nearly 19 per cent., due, as in Burma, chiefly to increased area under tillage, for the ratio of the foreign-born is the same as before. I will leave for the present the case of Madras and Bombay, to come to Oudh, where the increase of 11 per cent. in a tract with a density of 470 per mile in 1881 is astonishingly

good evidence of the fertility of the country; the more so because there, as in Sindh, the sex proportions afford no evidence of a fictitious increase. In the North-West Provinces, with a general low increase, there is a tract between the two great rivers in which there is a decrease, due to local causes connected, I believe, with excess of water from irrigating channels without adequate drainage. The Panjab shows a normal rate of increase, with the aid of an improved proportion of women, which leads one to suspect that a good many of that sex ought rightly to have appeared in the returns of ten years back, but did not. The progress of Assam has been retarded by the prevalence of the fever epidemic which I have already mentioned, but in the eastern portions of both the great valleys the increase has been very marked. I say nothing of the hill tracts, since it is clear that with every enumeration the accuracy of the return increases. The fact that with all its advantages the Central Provinces return only the normal increase of 9·6 per cent., is evidence of the weakness of the movement towards new country, except from the immediate vicinity. Berar, which affords an equally good field for the agriculturist, increased in a still more sober ratio, so it may be assumed that part of the rapid filling up of the few years before the last census was due to the temporary displacement by the famine of the cultivators of the Deccan. In the little province of Coorg we find the only instance of a decrease in the population of a whole territorial unit; and this exceptional feature seems to be due to an unusually early coffee and rice season, which allowed the labourers from Mysore and the coast to return home before the date of the census. The native-born population shows an increase of over 16 per cent.

In dealing with Madras and Bombay, we must distinguish between the famine tracts and the rest. In the former province the area most affected contained a population of 11,588,000, according to the census of 1881; whilst in Bombay the corresponding population was 5,684,000. At the census of 1891, the first tract showed an increase of 20 per cent., against 17 in the rest of the province. Bombay shows a still wider difference, for, whilst the more fortunate portion of the Presidency increased by only the normal 9 per cent., the seven famine districts show an increase of 19½. A feature worth noting in both the famine tracts, is that the home-born have not quite increased in the same proportion as the entire community, thus showing that though the bulk of the replenishment has been due to natural growth, there has been more immigration than is the case in the rest of the province. Whether this movement is that of strangers, or the return of families who have been multiplying

elsewhere in the interval, is a point on which I have as yet insufficient information.

The attraction of the town in India is hardly a subject requiring much comment, but considering its importance in England, I ought not to entirely pass it over. On the whole, the increase in the urban population is but a trifle below that found amongst the community at large, but there is a distinct tendency towards a higher rate in the towns of 20,000 and upwards; and I notice, too, that in the aggregate of towns of this size the males have increased considerably faster than the other sex, a fact which indicates a real movement, though it may be but a seasonal and temporary one. It is certainly the latter in both Bombay and Rangoon, where the cotton mills and dock work of the one and the rice and timber shipments in the other attract men who leave their families behind them in their native villages till the return of the cultivating season, which finds the cities with a very reduced population. In Calcutta the increase is in the suburbs, and the central portion of the metropolitan area shows scarcely any variation. This is due, probably, to the increase in the jute and similar industries, which are carried on at a distance from the actual town. On the whole, the large increase in the urban population will be found in the seaports and manufacturing towns, to which we may add most of the large military stations, whilst the old capitals—which are not manufacturing towns in the modern acceptance of the title, and which trusted for their prosperity to the precarious patronage of a native court—are on the wane. In the first category we may place Karachi, with its 43 per cent. of increase; Rangoon, with 34; Cawnpore, with 25. The military stations are well represented by Poona, with 24; Meerut, with 20; and Bangalore, with 16 per cent. of increase. In the case of Bombay, a large and flourishing city, with both port and manufactures, the increase was only just over 6 per cent., a result which, by what seems to us a strange perversion of sentiment, was greeted with some wrath by the local journals, anxious to raise their residence in the scale of cities. But the comparatively small increase is attributable, first, to the migration of workmen to the suburbs, where food and lodging are cheaper, while special trains are run for them at the most convenient times, as in London; secondly, there is either less demand for female labour in the capital, or else the improved steam communication with the coast ports, from which most of this class of workmen come, renders it more convenient for them to leave their families at home, and to visit them as occasion offers. Amongst the towns of old repute in the history of India we find only Delhi, Ahmedabad, Nagpur, and one or two others that maintain a rate of progress equivalent to that of the

surrounding country. Patna and Surat have actually fallen back, and Agra, Lucknow, Benares, and Dacca are either stationary or increasing almost imperceptibly, and partly, doubtless, from the stimulus given to trade by the adjacent British cantonments. In the native States, as I have said, these towns fare better, and Jaipur, Gwalior, Haidrabad, and Baroda grow at a rate exceeding, or, at all events, not less than, the average.

I must add a few words on the general increase in the native States, though there is no reason to treat that subject in special detail. Of the larger States, Mysore follows fairly closely the fortunes of the surrounding districts of the Madras Province, where the famine was most rife in 1876-77; and both here and in Haidrabad the increase of 18 and 17 per cent. respectively may be taken as representing to a great extent the replenishment of a fairly fertile tract after severe scarcity. But when we come to an increase of over 20 per cent. in Rajputana, and find that the females have multiplied by 23 per cent. to the 17 of the males, it is clear that we must tread the path of inference with some circumspection. It is the same with the Central Province States and a few other groups. I have tried to trace any tendency, such as I thought might be found, of a movement from British territory—especially where the population was near the capacity of the land to sustain it—to the sparsely-peopled tracts of adjacent native States, but hitherto I have failed to find satisfactory indications of this inclination. Where there is a considerable interchange of population between the two tracts, it is generally due, I notice, to intricate complications of territory, such as we find in the Central Provinces, the Bombay States, and Baroda, where the State is often merely an *enclave* in a British division. The greater the line of frontier, the more frequent is the exchange of children in marriage between the two tracts, and the larger area is usually found to give more than it takes. As regards the relative proportions of the home-born, there seems to be little real difference between British and feudatory territory.

I have now traversed the whole field of that portion of the census results which I proposed to consider on this occasion, and since, for want of leisure, I have been more prolix than I wished, I must recall your attention to what I think are the main facts disclosed in the review I have undertaken. Taken as a whole, the population of India is not a dense one, but it is very unevenly distributed. There are large tracts that are capable of supporting many times more people than they are called upon to do at present, and where the density is greatest, the pressure is attributable to the natural, and I may say, comparatively healthy, expansion of an agricultural community, situated in circumstances peculiarly

favourable to their traditional pursuits, not to the abnormal attraction to the town that is characteristic of the movement of population in western continents. On the other hand, the great preponderance of the agricultural population, combined with large areas of uncertain rainfall, imply the existence of a considerable residuum, living at the best of times, more or less from hand to mouth, on field labour, or on land which is insufficient to serve by itself as the support of the occupant and his inevitable family. It is true that their wants, in the way of clothing and shelter, are very few, but with a diet of cereals, vegetables, and milk, such as is almost universal, they are all the more sensitive to failure of crops or pasturage. Again, a cultivating community is proverbially and justifiably reluctant to cast off moorings from conditions and associations with which it is familiar, and betake itself to strange settlements. In India, accordingly, we find that wherever such a population can advance in a line, as it were, keeping touch with its ancestors and traditions, the movement is onward and regular. But in the cases where a belt of country of a class different to what the people have been accustomed to, intervenes between the old settlements and the fields available for colonisation; still more when this tract is inhabited by men of other castes or language, the breach in continuity is too wide to be attempted by the mass of the population most interested in the migration. They prefer to go on piling up heirs to the ills they have, to flying to others that will not affect them for several generations. But in spite of uniformity of occupation and the dislike of change, the population shows no tendency in its movement but what is to be found in nearly every other country of the world, a moderate rate of increase, in the main, largely exceeded in the less developed tracts, and to some degree falling short of the average in those at the opposite end of the balance. If we discount errors in enumeration in both excess and defect, it will be found, I believe, that this average rate will tend to decrease at every succeeding enumeration, as it does elsewhere, though we must, I fear, reckon with famine in some part of the country or other before next census. In connection with this, however, I must add, though not from my census returns, that universal scarcity throughout India is unknown. The records of rainfall indicate that, speaking roughly, two-thirds of the area are always affected in more or less the same way, so that a deficient fall in one-third will be accompanied by a fair or good season in the rest. Moreover, since last census, the mileage of railway in work has been increased by 79 per cent., so that, now, the produce of one province can be, and is, poured into the depleted granaries of another with unexampled celerity, a fact of which I can speak from experience.

I will conclude by quoting a few figures which serve to show that the growth of population during the decade has not been unaccompanied by proportionate development in other directions, tending to prove the increased prosperity of the masses. I will not detain you with much of this evidence, more especially as I have been honoured by the Secretary of State for India with the task of analysing it in detail for submission to Parliament, as soon as I have finished my work in connection with the census. But picking out from the mass of statistics relating to the decade that have accumulated in my office, a few of those most intimately connected with the well-being of the people at large, I have thrown them into tables that are to be appended to this paper. From these you will perceive that, as compared with the year immediately preceding the census of ten years back, which is taken as the base line to show the annual fluctuations, the State revenue from land, which refers, of course, to British territory alone, has increased by 14 per cent.; the consumption of salt by 18 per cent.; and stamp revenue by 25. Then, again, look at the business of the inland post and telegraph offices, which has grown enormously. Letters, and we have in India one of the relatively cheapest postal scales in the world, are as 105 to 1, and post cards, at less than a farthing and a half, were sent at the rate of 580 to every one posted in 1880. Private telegrams have increased more than letters in proportion, though less than the favourite means of communication by card. In railway enterprise, too, the increase is very noteworthy, for I must remind you that the chief pleasure, as well as one of the chief religious duties, of the orthodox Hindu, is the periodic pilgrimage to the shrine, or series of shrines, of his patron deity. On such excursions he invariably takes his family, and the rites at the shrine and bathing places are supplemented by the attractions of an enormous fair. It is not surprising, then, to find that the cheap and speedy mode of progressing by rail has proved more popular than the weary journey of weeks' duration by cart or on foot, and it also absolves the faithful from the necessity of measuring a certain proportion of the way in somersaults, or by his own length like a leech. Not only the Hindu, but the Mussulman, is called upon to perform a pilgrimage, and the rail that now connects Bombay with Upper India is a boon much appreciated by those bound for Mecca, and we find that even pilgrims from Central Asia select this route. We find, accordingly, that the passenger traffic increased by over 133 per cent., whilst the goods work shows the rate, otherwise sufficiently respectable, of 97. The trade statistics are from the hands of Mr. O'Connor, an honorary member of our Society, who has elaborated them so that they will now bear comparison, I may say, with any corres-

ponding returns in the world. For my present purpose it is enough to call attention to a few items, because to treat them as a whole entails a laborious process of averaging, which I am deferring till next year. As connected with the occupation of the bulk of the people, take, for instance, oil seeds, which have risen in bulk by 45 per cent., and wheat, with many vicissitudes, by 19. As to raw material, take jute, silk, wool, and cotton, the exports of which have all risen by 25 per cent. and over. In despite of the increased exports of cotton, it will be seen that the manufactures of that fibre in India itself show a notable rise, for the export of piece goods of Indian make rose about 123 per cent., and the imports of the same class of goods from foreign countries only 13. The figures for yarn, too, are worth attention. Without spending time in commenting on the rest of the items in question, I will merely point out that with an increase of population of, say, 10 per cent., the aggregate value of trade, whether of import or of the export of Indian produce, has risen in the decade by over 33 per cent. I will not enter into the question of how far the appreciation of gold, or the fall in silver, whichever it is to be called, must be discounted in the above statements, since I have purposely taken the two branches of trade together to avoid that thorny matter. It is to some of us a painful subject, and the manifold ways in which during the last month or two it has been "put in a nutshell" before us, only deepens the gloom. But, in addition to the figures I have quoted, which are those for goods only, India has absorbed in the decade no less than 130 millions of treasure, or 41 of gold, and 89 of the baser metal, and the excess of exports over the nett imports of merchandise and treasure, which represents mainly the interest on British capital invested in India, amounted to about 166 millions. All this is in what is known as conventional sterling, that is, 10 rupees = 1*l.*, a fading reminiscence of the long past. Whatever may be the view we take of the balance of trade, I think the facts that I have been able to marshal before you, and I hope intelligibly, confirm my main propositions, that relatively to its means of subsistence, India is not over-peopled; that even in the favourable circumstances of the last ten years the population has not increased in an undue proportion to those means, whilst the rates of increase in its powers of production and purchase indicate a general rise in the wellbeing of the community at large.

APPENDIX A.

General Summary.

1	2	3	4 5		6	7	8
Province, State, or Agency.	Area in Square Miles.	Population in 1891.	Persons per		Urban Population.	Percentage of	
			Square Mile.	Village.*		Net Increase of Population since 1881.†	
						Total.	Urban.
Madras	141,189	35,630,440	252	578	9.56	15.58	10.75
Bombay	77,275	15,985,270	207	635	19.49	13.71	} 10.29
<i>Sindh</i>	47,789	2,871,774	60	686	11.92	18.97	
Bengal	151,543	71,346,987	471	301	4.82	6.89	7.37
North-West Provinces	83,286	34,254,254	411	384	12.70	4.55	2.24
<i>Oudh</i>	24,217	12,650,831	522	494	7.60	11.09	5.82
Panjáb	110,667	20,866,847	188	548	11.56	10.74	7.93
Upper Burma.....	83,473	2,946,933	35	246	12.60	....	....
Lower "	87,957	4,658,627	53	236	12.35	24.67	7.86
Central Provinces	86,501	10,784,294	125	299	6.85	9.61	7.11
Assam and North Lushai land }	49,004	5,476,833	112	318	1.86	11.30	10.37
Berár	17,718	2,897,491	163	464	12.45	8.41	8.49
Coorg	1,583	173,055	109	348	8.96	-2.94	-7.36
Ajmer-Mérwára.....	2,711	542,358	200	581	21.87	17.72	22.44
Quettah, Aden, and Andamans }	80	86,958	....	....	....	....	....
Total British Provinces	964,993	221,172,952	229	383	9.22	9.70	8.50
Haidrabád	82,698	11,537,040	139	539	9.45	17.18	11.09
Baroda	8,226	2,415,396	294	693	20.02	10.54	7.02
Mysore	27,936	4,943,604	177	274	12.67	18.09	13.55
Kashmér.....	80,900	2,543,952	31	287	7.77	....	....
Rajputána	130,268	12,016,102	92	363	12.73	20.22	12.22
Central India	77,808	10,318,812	133	297	9.34	9.92	7.27
Bombay States	69,045	8,059,298	117	475	14.61	16.35	12.67
Madras "	9,609	3,700,622	385	1,703	4.73	10.63	0.85
Central Province States....	29,435	2,160,511	73	207	1.79	26.36	12.09
Bengal States	35,834	3,296,379	93	174	0.50	18.30	8.85
North - West Province States }	5,109	792,491	155	309	13.02	6.84	2.01
Panjáb States.....	38,299	4,263,280	111	212	10.71	10.42	6.77
Fort Steadman (Shán) Outposts) } .....	....	2,992	....	....	....	....	....
Total Feudatory States	595,167	66,050,479	111	338	10.38	15.52	12.32
Total India	1,560,160	287,223,431	184	372	9.48	10.96	9.40

* Places of under 10,000 inhabitants, including the smaller towns.

† Excluding tracts and towns not enumerated in 1881 as well as in 1891.

Percentage Variation from the Mean.	British India.				British and Feudatory India.				India, by Rainfall.			
	Average Density of each Group.	Percentage of each Group on		Percentage Increase since 1881.	Average Density of each Group.	Percentage of each Group on		Percentage Increase since 1881.	Average Rainfall of each Group.	Average Density of each Group.	Percentage of each Group on	
		Total Area.	Total Population.			Total Area.	Total Population.				Total Area.	Total Population.
75 and under	24	18·94	2·00	17·75	25	21·13	2·89	25·06	inches	54	9·40	2·49
66—74	70	6·98	2·16	14·66	53	3·24	0·94	20·57	13	66	5·09	1·64
50—65	96	10·97	4·63	14·17	74	11·75	4·79	21·29	17	158	2·72	2·10
33—49	136	13·48	8·05	14·40	109	8·65	5·16	13·65	25	171	12·59	10·48
20—32	166	7·84	5·75	13·00	135	15·92	11·85	14·68	30	199	14·07	13·62
10—19	196	2·99	2·58	14·02	157	5·94	5·12	16·40	35	247	6·84	8·22
1—9	226	4·45	4·40	10·69	172	2·43	2·29	12·12	41	267	10·88	14·12
Total below mean	102	65·65	29·58	13·64	87	69·06	33·04	16·28	26	476	61·59	52·67
1—9	236	2·28	2·37	10·24	191	3·23	3·38	11·99	46	304	6·47	9·59
10—19	262	3·16	3·66	15·95	214	1·45	1·70	11·61	49	310	5·54	8·38
20—32	290	3·73	4·77	15·64	229	3·70	4·63	12·18	53	160	6·08	4·76
33—49	326	0·96	1·37	9·05	259	3·03	4·32	14·10	60	226	6·17	6·78
50—65	371	2·53	4·14	8·37	290	2·37	3·77	15·42	68	291	2·37	4·78
66—74	395	1·55	2·69	8·73	318	0·52	0·90	14·30	73	865	0·21	0·90
75—99	434	3·41	6·53	4·99	347	1·49	2·83	10·00	77	156	3·21	2·44
100—149	514	8·89	20·12	6·68	410	4·61	10·34	6·17	91	249	3·23	3·92
150—199	617	4·28	11·65	7·00	509	5·13	14·30	7·00	115	281	2·97	4·06
200 and over	838	3·56	13·12	8·06	701	5·41	20·79	7·43	140	306	1·16	1·72
Total above mean	464	34·35	70·42	8·19	395	30·94	66·96	8·78	66	253	38·41	47·33

EXPLANATION.—This table is compiled from district and State units, wherever such are available, but Kashmir and Central India have had to be taken respectively as a whole, so that the distribution in the case of the second section of the table is more irregular than that for British territory only. The remarkable increase in the latter for the groups between 10 and 32 per cent. above the mean density is due to the inclusion here of some coast districts and those in Central Madras more or less affected by famine in 1876-78. In the third, or rainfall, section of the table, Kashmir, Lower Burma, and Central India are excluded, as the areas for their respective component subdivisions are not ascertained. The fall in density of population as the rainfall rises, which is apparent in the groups 20 per cent. above the mean and some of its successors, is mainly due to the inclusion of the hill tracts of Central India, where the fall is heavy but the population at present sparse. The group 66 to 74 per cent. above the mean comprises only one district, Dacca, in Bengal.

* Referring to the diagrams exhibited when the paper was read.

† Excluding the chief seaports and the detached settlements.

APPENDIX C.

Immigration.

Provinces.	Percentage of People Born in			Number of Females to 1,000 Males in		
	A. District, &c., where Enu- merated.	B. Con- tiguous Territory.	Total A + B.	A.	B.	Total Popula- tion.
Madras and States	96·01	3·13	99·14	1,011	1,221	1,022
Bombay „	88·08	6·83	94·91	946	1,452	951
<i>Sindh</i> and <i>Khairpūr</i>	88·24	8·09	96·33	854	727	831
Bengal and States	91·42	3·91	95·33	1,025	1,044	1,006
North-West Provinces } and States..... }	89·10	8·85	97·95	860	1,926	923
<i>Oudh</i>	89·11	9·33	98·44	902	1,565	949
Panjáb and States	86·92	9·22	96·14	899	1,218	854
Upper Burma	92·89	3·65	96·54	1,136	860	1,084
Lower „	81·41	4·99	86·40	1,002	664	892
Central Provinces and } States	86·64	10·79	97·43	996	1,108	998
Assam and North } Lushai land	88·68	2·62	91·30	980	665	942
Berár.....	76·78	18·14	94·92	925	1,159	942
Coorg.....	69·42	27·68	97·10	950	552	804
Ajmér-Merwára	79·86	13·82	93·78	832	1,425	881
Haidrabád	90·54	5·75	96·29	952	1,211	964
Baroda	86·29	10·26	96·55	868	1,720	928
Mysore	92·19	5·33	97·52	994	1,062	991
Kashmér*.....	97·26	2·62	99·88	877	1,089	879
Rajputána	91·20	7·24	98·44	840	1,902	891
Central India*.....	92·71	6·09	98·80	899	1,218	912
Total India.....	90·38	6·23	96·61	947	1,370	957

* The State and the Agency, respectively, are here taken as a single unit.

APPENDIX D.

*Variation per Cent. of Main Items of Revenue, Commerce, &c., from the
Figures for 1880-81.*

Year.	State Revenue from			Consump- tion of Salt.	Post and Telegraph Transactions (Non-Official Correspondence only).			Value of Currency Notes Issued.
	Land.	Stamps.	Salt.		Letters.	Post Cards.	Private and Inland Telegrams.	
1881-82....	+ 3'96	+ 4'02	+ 3'52	+ 3'49	+ 7'97	+ 47'68	— 0'86	— 1'16
'82-83....	+ 3'61	+ 3'97	— 13'18	+ 8'52	+ 17'62	+ 100'77	+ 13'92	+ 11'11
'83-84....	+ 5'92	+ 8'08	— 13'63	+ 10'32	+ 28'16	+ 159'92	+ 18'39	— 2'02
'84-85....	+ 3'41	+ 10'95	— 8'56	+ 13'66	+ 38'87	+ 227'60	+ 30'72	+ 6'42
'85-86....	+ 7'01	+ 12'69	— 10'83	+ 12'03	+ 53'20	+ 295'92	+ 46'34	+ 7'67
'86-87....	+ 9'20	+ 15'40	— 6'44	+ 19'05	+ 63'60	+ 355'81	+ 61'26	+ 3'94
'87-88....	+ 9'83	+ 19'25	— 6'26	+ 16'06	+ 72'94	+ 410'29	+ 78'18	+ 18'29
'88-89....	+ 9'02	+ 20'81	+ 7'86	+ 17'00	+ 84'80	+ 477'96	+ 102'65	+ 20'26
'89-90....	+ 13'59	+ 25'76	+ 15'06	+ 16'98	+ 96'63	+ 535'30	+ 109'90	+ 18'21
'90-91....	+ 13'89	+ 25'18	+ 19'78	+ 18'29	+ 105'01	+ 579'80	+ 126'51	+ 67'53
Mean of ten years }	+ 7'94	+ 14'61	— 2'23	+ 13'54	+ 56'31	+ 319'11	+ 58'70	+ 15'02

Year.	Railways.				Private Trade.				Ratio of net excess Exports over Imports including Treasure.
	Miles Worked.	Pas- sengers.	Goods.	Net Earnings.	Merchandise.		Treasure.		
					Imports.	Exports (of Indian Produce and Manufac- tures).	Imports.	Exports.	
1881-82....	+ 4'16	+ 12'61	+ 12'28	+ 9'80	— 6'59	+ 10'12	+ 25'97	— 23'65	+ 66'26
'82-83....	+ 7'80	+ 24'51	+ 29'36	+ 21'21	— 0'61	+ 11'98	+ 49'68	— 27'66	+ 28'25
'83-84....	+ 12'54	+ 41'18	+ 26'13	+ 13'77	+ 4'76	+ 18'22	+ 43'28	— 29'86	+ 36'53
'84-85....	+ 17'00	+ 54'67	+ 43'25	+ 31'26	+ 5'65	+ 11'59	+ 54'52	+ 36'81	+ 0'78
'85-86....	+ 28'07	+ 69'15	+ 48'18	+ 40'57	+ 2'99	+ 12'17	+ 72'20	— 23'06	— 13'78
'86-87....	+ 42'72	+ 82'49	+ 52'87	+ 34'69	+ 16'60	+ 17'97	+ 22'98	+ 19'44	+ 6'40
'87-88....	+ 46'11	+ 97'30	+ 69'50	+ 42'25	+ 24'00	+ 20'00	+ 53'82	+ 11'40	— 24'85
'88-89....	+ 46'76	+ 111'64	+ 68'41	+ 45'50	+ 32'32	+ 28'72	+ 54'03	+ 23'88	— 16'83
'89-90....	+ 70'64	+ 118'20	+ 71'16	+ 49'02	+ 32'30	+ 37'69	+ 94'25	+ 32'44	— 3'79
'90-91....	+ 79'16	+ 133'22	+ 96'77	+ 82'50	+ 37'22	+ 33'25	+ 144'04	+ 47'40	— 64'25
Mean of ten years }	+ 34'86	+ 74'50	+ 51'79	+ 37'06	+ 14'86	+ 20'17	+ 61'47	+ 6'70	— 1'83

Variation per Cent. of Main Items of Revenue, Commerce, &c.—Concl'd.

Year.	Imports (Quantities).								
	Iron.	Hardware.	Copper.	Kerosine Oil.	Sugars.	Silk Manufactures.	Woollen Manufactures.	Cotton Piece Goods.	Cotton Twist and Yarn.
1881-82	- 7'99	+ 13'40	- 11'42	- 9'04	- 21'33	- 10'13	- 21'36	- 8'56	- 11'15
'82-83	+ 18'25	+ 43'30	+ 17'92	+ 105'36	- 31'80	- 28'75	- 38'40	- 7'53	- 2'22
'83-84	+ 32'94	+ 47'29	+ 38'92	+ 35'23	- 25'29	- 14'90	- 17'22	- 2'95	- 1'09
'84-85	+ 35'14	+ 52'84	+ 44'73	+ 171'34	+ 63'93	- 11'01	- 4'93	- 2'39	- 2'35
'85-86	+ 31'05	+ 40'54	+ 71'08	+ 81'54	+ 18'74	- 17'68	- 0'28	- 1'86	+ 0'08
'86-87	+ 23'06	+ 56'62	+ 61'14	+ 219'47	+ 77'38	- 2'99	+ 7'81	+ 21'35	+ 6'83
'87-88	+ 62'12	+ 97'98	+ 39'55	+ 211'59	+ 83'36	+ 15'89	+ 22'68	+ 3'52	+ 12'35
'88-89	+ 50'17	+ 99'47	- 74'20	+ 295'01	+ 64'01	+ 11'80	+ 5'42	+ 19'70	+ 14'63
'89-90	+ 35'37	+ 98'39	+ 49'05	+ 434'85	+ 74'70	+ 13'49	- 9'23	+ 12'42	+ 1'10
'90-91	+ 45'43	+ 116'74	+ 16'97	+ 442'30	+ 197'26	- 11'36	+ 16'49	+ 13'39	+ 11'10
Mean of ten years }	+ 32'56	+ 66'66	+ 26'68	+ 198'77	+ 50'10	- 6'57	- 3'90	+ 4'71	+ 2'93

Year.	Exports (Quantities), Indian Produce or Manufacture.								
	Raw Cotton.	Rice.	Wheat.	Oil Seed.	Raw Jute.	Raw Wool.	Cotton Twist and Yarn.	Cotton Piece Goods.	Jute Manufactures.
1881-82	+ 23'96	+ 5'95	+ 167'33	+ 1'73	+ 29'27	+ 3'92	+ 14'44	- 1'63	- 19'69
'82-83	+ 35'86	+ 14'64	+ 90'66	+ 27'60	+ 78'13	+ 2'46	+ 68'68	+ 36'69	+ 27'40
'83-84	+ 31'83	- 0'83	+ 182'11	+ 68'46	+ 20'80	- 1'99	+ 85'41	+ 82'87	+ 21'49
'84-85	+ 11'63	- 19'12	+ 112'92	+ 77'22	+ 44'04	- 0'85	+ 144'96	+ 57'67	+ 58'02
'85-86	- 7'71	+ 3'51	+ 183'02	+ 68'09	+ 33'95	+ 21'67	+ 190'85	+ 69'58	+ 21'71
'86-87	+ 19'69	- 1'42	+ 199'07	+ 54'38	+ 42'98	+ 31'07	+ 241'26	+ 75'62	+ 23'26
'87-88	+ 18'35	+ 4'65	+ 81'86	+ 56'08	+ 65'99	+ 36'26	+ 321'73	+ 128'52	+ 41'96
'88-89	+ 17'40	- 15'12	+ 136'57	+ 51'13	+ 81'64	+ 36'39	+ 379'18	+ 131'18	+ 90'49
'89-90	+ 39'23	- 0'61	+ 85'40	+ 53'32	+ 76'53	+ 48'64	+ 427'67	+ 95'70	+ 85'90
'90-91	+ 30'46	+ 28'23	+ 92'37	+ 43'65	+ 106'30	+ 32'57	+ 529'24	+ 122'61	+ 88'50
Mean of ten years }	+ 22'07	+ 1'99	+ 133'13	+ 50'16	+ 57'96	+ 21'01	+ 240'34	+ 79'88	+ 43'91

DISCUSSION *on* MR. BAINES'S PAPER.

SIR WILLIAM PLOWDEN said that the point in the paper which had struck him with the most force, was the conclusion at which the author had arrived concerning the prosperous and comparatively happy state of the people in India. He had had a long experience of the country himself, and in the early part of his career—forty years ago he regretted to have to admit—had been appointed to a post in the north of India. Revisiting this district in a higher capacity some thirty years later, he had noticed that this tract, one of the richest in the Gangetic Doab, had improved in every possible manner, and that the condition of the people had improved in a more than corresponding degree. In spite of the great pressure on the land in many instances, he considered the condition of the Indian population as a whole to be superior to that of the inhabitants of Europe. He had lately spent a few weeks in Bohemia, where the mining population was getting a wage of about 20*d.* a-day (as compared with 4*s.* or 5*s.* in England), but even that 20*d.* did not represent so good a chance of life as the still smaller sum obtained by Indian agriculturists: the fact being that the purchasing power of money in India was far greater than in Europe; besides which, owing to climatic and other causes, the requirements of the people were less. Two important facts especially had been brought out by Mr. Baines, which were being outlined at the time of the last census in 1881. One was the short duration of life in the East. In Italy the average duration of life was only about twenty-seven years, in India it was still less, but this was hardly surprising when we consider that the climate of Italy, apart from the malarious areas, is generally considered satisfactory. On another point, viz., that migration had ceased, he could not agree with the author. Bearing in mind what came to his knowledge in 1881, he should say that there were portions of the country, for instance in the Central Provinces, where a considerable amount of migration certainly had been going on, and that a great deal of the increase, in tracts like the Central Provinces, was due, not so much to the prolific nature of the population, but at least partially to migration. He believed that considerable advantage would accrue to the people were this encouraged: the pressure on the land was extremely varied, and there were large areas where migration might successfully be applied, so long as it was encouraged with due regard to the conditions and circumstances of the villagers from whom the migrants came.

Sir CHARLES BERNARD pointed out that India was, of all the countries of the world, the one with the largest population in which a general census in a scientific way had ever been taken. He regarded the excellent paper read as satisfactory evidence that the Government had been most fortunate in getting Mr. Baines to direct

their census, and to co-ordinate the results thereof for the use of India and for the information of the world. The Government could not afford to present census reports and census results in the elaborate and complete form adopted by the Census Bureau of the United States, yet he was confident that Mr. Baines's forthcoming report would be not unworthy of the greatness of the subject. The lecturer had spoken of the bar to immigration formed by the Himalayas. He (Sir C. Bernard) was glad to think that in past years this range had not prevented the inroads of colonists, who had proved of the greatest value to the country. The forefathers of all the great Hindu populations of the plains had, it was believed, come from the north, and had pushed back the aboriginal black races, so much so that these latter were now to be found only in the hills in the central parts of the country, and the whole of the plains were peopled by the more civilised and more energetic peoples. These also occupied the whole of the Himalayas as far as west of the Ganges, where they came into touch with the Turanians. With regard to rice, which the author spoke of as being the most prolific of cereals, and a product which usually went with a dense population, he would mention that a crop of rice even in Burma or Bengal did not yield, on the average, more than half the weight of food to the acre that was yielded in Britain by wheat or barley. He thought that if India were taken as a whole, it would be found that the rice-eating population was not the heaviest, for rice was, with certain exceptions in small coast tracts, eaten as the ordinary food of the poor only in those districts where the annual rainfall exceeded 60 inches, *i.e.*, roughly, in the tract to the east of the 82nd or 83rd degree of longitude. It was quite true that, generally speaking, the population was densest where the rainfall was heaviest and the soil most fertile, but there were notable exceptions; for instance, Lower Burma and Assam were rice-eating provinces, and yet they were among the most thinly peopled parts of India. Again, Eastern and Central Bengal were rice-growing tracts, with a greater rainfall and a richer soil than Behar or Benares, yet they were less thickly peopled than Behar. It might appear difficult to see, if the population continued to increase at the rate of 25 to 30 millions every ten years, where the food was to come from. As the author had explained, the inhabitants increased more rapidly than in England because the generations succeeded each other more quickly; in fact it would not be far from the truth to say twice as quickly, for a woman was usually a mother at the age of 15, and was often a grandmother at the age of 32. But, on the other hand, there was greater mortality, and another social phenomenon was the great rarity of large families in India; then again, as remarked by Mr. Baines, famines and epidemics helped to reduce their numbers. He did not think that small pox nowadays was responsible for any large percentage of the deaths. There was an immense spread of vaccination, about 6 or 7 million persons being vaccinated every year, and the disease was now practically unknown in some tracts and in most cities where it was formerly a most frightful scourge. Two or three years ago there were only two deaths from small pox

in Madras and less than 20 in Calcutta during the twelve months. This he believed would compare very favourably with towns of equal size in Europe. The author had gone a little further than he (Sir C. Bernard) was prepared to go with regard to famine or scarcity afflicting two-thirds of India at the same time. No doubt far spreading famines as occurred in 1876-78 greatly reduced the population, as well from reduced births as from actual famine deaths; but he was glad to say that famine had never at any one time affected anything like one-third or even one-fourth of the whole country, much less the two-thirds mentioned by Mr. Baines. The worst famine he had known during an experience of thirty-five years was that of 1876-78, which was felt by 45 millions of people; but in those years there were excellent harvests over the rest of the country. The railways now carried food from one part of India to another, and he trusted that such a mortality as occurred in 1877-78 would never be seen again. Last year there was a serious failure of the crops in Madras and parts of other provinces, but though the price of food reached what twenty years ago would have been considered famine rates, there had been no deaths which could fairly be attributed to famine. It might seem as if with this immense population there could be no surplus, yet the single province of Lower Burma, which devoted ten-elevenths of its cultivated area to rice, exported every year fully half its produce. In ordinary years this went to Europe and Eastern Asia, besides India, but in times of famine the whole of this surplus was available for the needs of the stricken provinces of India. Rice, it was said, was an extremely prolific grain. That was so where the lands were irrigated, when they would bear two or two and a half crops in the year, and the produce would be very heavy; but the greater part of the country bore but one crop a year, and the average yield per acre could certainly not be set down as more than 16 bushels of eatable clear rice.

Mr. F. HENDRIKS wished to call the attention of the meeting to the fact that these statistics showed that although the area of British India occupied only about one-fifteenth of the area of the habitable globe, yet it contained nearly one-sixth of its population. This at once suggested the question whether the population of the variously circumstanced nations comprised in the vast territory of India was not treading very closely upon its means of subsistence? He thought they were; for we are told by historical records which can be relied on that those parts of India that were known in former days were very thickly inhabited in the time of Queen Elizabeth, probably indeed more populous then than at the present date; and had there been no natural checks since then, such as famine, war, and great mortality, the whole of India would now be in a state of starvation. This pointed to the cardinal fact taught by Malthus, one of the founders of this Society, that population, left to itself and self-included, can hardly fail to overstep the utmost possible limits of subsistence. As the lecturer had pointed out, the population of India was distinctly self-included, both by geographical circumstances and by the inherent antipathy

of the natives, who are naturally wedded to caste and village life, to move to other parts of the country where they would find a different religion and customs. In spite therefore of the reassuring remarks made by Sir W. Plowden, he thought it open to question whether the people were able to support themselves in *all* parts of India. The data which might help in answering this would, he hoped, be brought out by the census. He thought that this was a very serious question for a country whose population was two and a half times as dense as the average, unless some means of migration were adopted to counteract and thus to check the increase. China was a case in point: there the people had been obliged to emigrate as an alternative to starvation. It had been admitted that in India the mortality was much greater, and the average life much shorter than in Europe, and it might also be assumed that many of the races comprised in its territory were not in possession of the same comforts as other nations. The frequent famines which had occurred were a proof of what he had stated. No doubt railways did very much to ameliorate the condition of things nowadays, when grain could be carried to the famine stricken districts; still the large increase in the population revealed by the census, led him to the thought that there was plenty of reason for further reflection on this very serious question.

Mr. NOEL A. HUMPHREYS said that, with regard to the difficulties encountered in taking the Indian census, he had had great pleasure in reading the paper contributed by Mr. Baines on this subject some months ago to the Society of Arts. It had been the experience in England that each census had shown evidence of increased accuracy over the preceding one, and the recent Indian census taken by Mr. Baines had proved no exception to this rule. The most important fact brought out by this Indian census was, he thought, the small rate of increase of population. In the ten years the rate of increase was only 11 per cent., and almost identical with that which prevailed in England; this was the more remarkable because the birth-rate in India was generally considered to be enormously high. The census returns are probably, as stated, more accurate than those of the previous census, and consequently the rate of increase would be rather over than understated. There was very little immigration or emigration, and the increase was therefore almost entirely due to the excess of births over deaths. The author estimated the birth-rate at about 50 per 1,000, but he ventured to doubt the reality of this high rate. The returns as to age suggested great inaccuracy of statement; for instance, the population between 40 and 45 years was returned at 18,000,000, between 45 and 59 years, at 9,000,000, and between 50 and 55 at 12,000,000. According to Mr. Baines's figures there were about 147 per 1,000 of the population under 5 years of age, against 123 in England. This suggested a high birth-rate, but one probably not higher than 37 to 40 per 1,000. Then it would follow that the death-rate was about 10 per 1,000 lower, or from 27 to 30 per 1,000, whereas Mr. Baines estimated it to be about 40. This all pointed to the need of a more complete registration of births and

deaths, a need to which the authorities were doubtless fully alive; indeed, it would appear to have improved considerably of late years. One other point he would touch on: the expectation of life at birth was calculated to be about twenty-five years. He hoped Mr. Baines in his reply would explain on what grounds he had based this conclusion, seeing that there was practically no registration of deaths in India sufficiently accurate and complete to serve as the basis of a life table.

Mr. PRICE-WILLIAMS shared the opinion of the last speaker, that there was much in the paper of a reassuring character; the fact that the population was increasing less rapidly in the more densely populated, than in the sparsely populated districts was also satisfactory. The more rapid rate of increase in the less fertile parts was no doubt the result in a great measure of the development of the natural resources of the districts consequent upon the construction of railways. It was noteworthy that the most fertile districts were those in which there was a maximum rainfall, and encouraging to find that it was there where the population per square mile was the greatest; this was very strikingly confirmed by reference to the very interesting diagrams illustrating the paper: the dark lines in the one showing the localities of maximum rainfall closely corresponding with those showing the areas of maximum density of the population.

The small proportion of the town population in India, only 10 per cent., is also very remarkable, but to some extent probably may be accounted for by the exceptional number of villages in India, of which it appears there are no less than 715,000, with an average population of 372 each. The characteristics of village life in India, to which the author refers, are exceedingly interesting, and during a recent visit to the Deccan he was much impressed with their number, and the indication everywhere observable of this tendency of the native population to village life.

As regards any comparison between the average densities of the population of India and that in England, it should be remembered that while the density of the population in England and Wales averages 498 people to the square mile, as stated in the paper, the 184 people per mile in India represents the average density of a great continent. The greatest density of population is met with in the State of Oudh, which has 522 people per square mile; this however is nothing as compared with what we have in the county Palatine of Lancashire, where, according to the last census, it averages as much as 2,080 people per square mile, to say nothing of the county of Middlesex, which, within its small area of 283 square miles, includes a population of over $3\frac{1}{4}$ millions, with an average density of 11,477 per square mile.

Under these circumstances he saw nothing to be alarmed at should the present rate of increase of the population continue. The average rate of increase for the whole of India during the last decade was 10.96 per cent., or very nearly the same rate as that for England and Wales during the same period; the increment

of increase in the one case however was only just a little over 3 millions, while in the case of India the addition to the population was over 28 millions; notwithstanding this, and the fact that at the present rate of increase of 10·96 per cent. the population would double itself in between sixty-six and sixty-seven years, the average population per square mile would even then amount to less than a fourth of what it is at present in the county of Lancashire; and having regard to this, and to the immense undeveloped resources of India to which the author had drawn attention, there was evidently ample reason yet for the healthy expansion of the population in India.

MR. ROWLAND HAMILTON thought it would be interesting to trace how much of the infant mortality was due to the system of early marriages. This was a question on which light could be thrown only by successive censuses. It might perhaps be as well to point out that India was a congeries of nations, with a greater variety of language, religion, and race than in the whole of Europe. He could not agree that there was any pressing danger of the population outrunning the means of subsistence; thirty years ago there was more waste land than at present, but there were still large reserves which could be utilised. Even in the desert lands south of the Indus water might constantly be found within a given distance of the surface; this had not hitherto been utilised, because it was not wanted, but in the event of great pressure a large area of land could be reclaimed, as had been done in ancient days in Persia, especially to the east of the Tigris, by means of artificial irrigation. Another point was the value of the snow ranges in maintaining the water supply. Besides attracting the moisture, the mountains, even in the worst of seasons, gave a large quantity of water, and he believed that all the great civilisations of the earliest times had been supported by a supply from snow sources. Later on came the still more powerful method of trusting to the "law of averages" by drawing from different sources the supplies required for the support of the whole community. In India, with its large extent and great variety of climate, there were ample means for making the excessive produce of one part of the country readily applicable to supply deficiencies in other quarters.

DR. MOUAT was afraid that he could throw little light upon the main issues raised by Mr. Baines's able and interesting paper, as he had not made a special study of the subject, and had been unable to master it from the absence of the details necessary to its complete understanding. These Mr. Baines would furnish hereafter.

He restricted his remarks to some of the statements made during the discussion, particularly to that relating to small pox in India, and the legislation on the introduction of vaccination, of which he gave a brief history. This had been accomplished with excellent effects by the conversion of the hereditary inoculators into vaccinators, without a violation of any of the religious tenets of the Hindus on the subject, as ascertained by the late Pundit Eshwar Chundra Bidyusagar, principal of the Sanscrit College of

Calcutta, in communication with the Pundits of Calcutta, Nuddea, and Benares.

As regarded the so-called Bardwan fever, which he considered a misnomer, since it was not a mere local disease, although first recognised at Bardwan, it was then attributed to the interception of the natural drainage of the district by the absence of sufficient waterways in the East India railway. He had inquired into the matter in one of his inspection tours, and traced the fever down to the Sunderbunds, where it appeared to him to have played very much the same part as a similar cause had done at Jessore in 1817, where the first outbreak of cholera in Bengal is believed to have originated. He had recorded his views in one of his official reports, and considered it a typho-malarial affection due to the general interruption of the drainage of the lower part of Bengal by the silting up of some of the channels in the delta of the Ganges and Brahmaputra—a process which is doubtless still in progress. The mortality caused by this disease had exceeded a million of souls, according to some of the calculations on the subject, and he had come across several large villages, inhabited chiefly by Mahomedans, which had been decimated and abandoned in consequence of its ravages. He had heard that an official investigation had been more recently made in the matter, which had confirmed his view, but he had not seen the report on the subject.

With reference to the subject of migration, his Bengal experience did not quite coincide with the views which had been expressed in the paper and discussion, as the natives of Upper India and the up-country Sepoys transferred to the Lower Provinces, bore the transfer very ill, and the great epidemic in Assam, to which a barbaric name had been assigned, he had heard was chiefly among the cultivators sent to that province, and not among indigenous races. He had not, however, seen the official statement on the subject.

Touching the 600 inches of rain mentioned by Mr. Baines, he had once been at Cherra Poonjee where this observation was made, for three days, when the average recorded was 24 inches daily, and in a morning's ride from there he reached Shillong, now the headquarters station of Assam, where it was about 60 inches. An experiment was made some years since to plant a small military colony at Cherra, and a number of old pensioners from Chunar, who had weathered the perils of alcohol in the plains, were sent there, where they were rapidly disposed of by the superabundance of water, which was uncongenial to them, and so this experiment to colonise the Himalayas was not repeated.

He cordially united in the encomiums bestowed upon the paper of Mr. Baines, who had carried to a successful issue the greatest work of the kind ever attempted by any nation, and exhibited in the most striking manner the prosperity of India and the beneficence of its rulers in the almost superhuman task entrusted to England.

Sir JULAND DANVERS said that the practical question raised by the discussion was whether India is capable of maintaining her

population by her own produce. There were in England two schools of thought—one which took a sanguine and one which took a pessimistic view—on this question. He was glad to see that Mr. Baines, after thoughtfully considering all the valuable facts which he had collected, belonged to the former. The conclusions at which he had arrived entirely coincided with his own, and he fully agreed in the opinion “that even in the favourable circumstances of the last ten years the population had not increased in an undue proportion to its means, while the rate of increase in its power of production and purchase indicated a general rise in the wellbeing of the community at large.” He was convinced that India was capable of doing much more in the future than she was doing now. The great object of the governing powers should be to develop the resources of the country in every possible way and to encourage its manufactures, so that other sources of wealth might be tapped, and the country should not be dependent upon agriculture alone. No doubt, as Mr. Hendriks had said, the problem was a very serious one, and required most careful attention; but he was himself sanguine enough to expect that a satisfactory solution would be arrived at.

Mr. CHARLES BOOTH (President) said that the only answer to Mr. Hendriks’s argument which he himself had ever seen was, that such a state of things as he forecasted never had come about. The world had been in existence a vast number of years, and according to any such rule, we ought all now to be standing shoulder to shoulder. It was true that famines and wars and other great disasters might be claimed to have made the theory, though apparently correct, inoperative, and they must hope for some less painful methods by which the balance might still be maintained in future. The paper showed plainly that there was no immediate danger in India; and so far as concerned any remote ultimate danger, he thought that they could only look forward with faith to the action of those large causes which had hitherto prevented too great a pressure of population on the earth.

Mr. BAINES, replying first to Sir Charles Bernard and Mr. Price-Williams as to the influence of railway enterprise, said that railways had certainly developed the country very remarkably in many ways, and primarily by the equalisation of prices and the introduction of grain into provinces suffering from scarcity, from others in which the superfluous produce was formerly allowed to rot on the ground. They also encouraged migration, and particularly that of a temporary character, enabling a man to transfer his labour into a neighbouring district for a season without breaking up the associations of his own village life. Dr. Mouat had referred to the suspicion of the natives. He did not himself think that it existed, except amongst the wildest tribes and the Mussulmans on the frontier. The enumerators themselves were natives of a more educated class, and seemed capable of inspiring confidence wherever they went. A good deal of the inaccuracy of detail was due to the general nature of the questions; they were not always understood.

As regards the extent and origin of some of the epidemics, he would mention that the population in parts of Assam had been seriously affected by the Kála-Azár, which he found from the returns had not been introduced by immigrants, but seemed to be inherent to the conditions of the country, especially south of the Brahmaputra. With regard to small pox and cholera, he thought there was still a great mortality from these two diseases. Although the returns of deaths were not very accurate, still they were sufficiently so to form a basis of comparison between year and year, especially in the case of these two plagues, as they were more accurately registered, partly owing to the scrutiny of vaccination returns, and partly to the regulations about whitewashing rooms and burning household furniture and utensils, &c., where there had been cholera. In ten years the highest annual mortality from small pox had been about 330,000, the lowest just over 50,000. The corresponding figures for cholera were 475,000 and 210,000. Mr. Rowland Hamilton had referred to the available areas of waste land, with reference more especially to the Punjab, which was the province of all others where the waste land question was most satisfactorily dealt with. As irrigation was extended, large numbers of the population could move forward in line further and further into the desert, without losing touch of their native village. He believed that the same advance was being made in the Egyptian delta. Irrigation was being largely extended also in Upper Burma, and reclamation of land in the lower part of that province, where the population was now increasing at the rate of over 2 per cent. per annum. The district of Thongwâ, for instance, showed an increase of over 50 per cent. simply on account of the large areas reclaimed; and the same thing was going on on a smaller scale along the west coast of India. The snow-fed rivers of the Punjab, as pointed out by Mr. Hamilton, were of the utmost importance in the fertilisation of the special quality of land available in that province. Early marriages are of course an element in the increase of population, though not so much as the universality of marriage. They were, on the other hand, an element in its decrease. Figures would be given on this subject in the full returns of the census. Amongst other supplemental returns in the present enumeration was one of marriage by caste. In many cases he believed that early marriages were not a question so much of caste as of locality. In Bombay it was evident that the custom of early marriage was generally local. In other provinces, Bengal particularly, where the system was most prevalent, it might not be so. Infant mortality was very high indeed in all these provinces, but it remained to be seen whether it had any connection with early marriages.

Mr. Price-Williams had considered the average of 370 persons per village to be rather high, but it should have been explained below the table he quoted that this referred to the population of all places of less than 10,000 inhabitants, and thus included a large number of small towns. With regard to the density in Lancashire and London, these areas were too small to be considered separately; he had found wards of Bombay and Calcutta even more thickly

crowded than the densest parishes of London. With reference to Mr. Humphreys's question as to the birth- and death-rates and the expectation of life at birth, he should mention that he found the subject of such interest that he had wavered between selecting as the subject of his paper that which he had ultimately taken, or the question of age, sex, and civil condition, in which he still looked forward to Mr. Humphreys's aid and advice. The birth- and death-rates, he could say, were calculated ten years ago from statistics of small areas in different parts of the country where the registration was known to be much more correctly conducted than in others; in Madras city, for instance, and amongst tribes suspected of infanticide in the North-West Provinces. The population observed in the latter case was about 300,000, scattered over different villages which were constantly watched. On these figures the 1881 rates had been calculated for the whole of India, and the life table was drawn up in London by Mr. G. F. Hardy, F.I.A., and from it the expectation of life of twenty-five years had been quoted. He fancied the result for last year, when worked out, would prove to be a little, but not much, less. The infant mortality was abnormally high in India.

In reference to Sir Charles Bernard's remarks, he said that, when considering the rainfall of the country, he had divided India into three parts, of which, meteorologically speaking, two ran together, while the third was in opposition. The tendency was, if the rainfall were deficient in two-thirds, it would be above the average in the rest. Conversely, a scarcity, sometimes amounting to local famine, might be found in one-third, but it was almost invariably accompanied by a plentiful harvest in the remaining two-thirds. As to the growth of rice, he had not intended his remarks to be understood in the sense that rice ensured, but that it accompanied a dense population. Where rice was grown in the dense districts of eastern Bengal, it was almost the only crop suitable, and, even in the corresponding tract along the Ghogra, it was the main cereal. Sir Charles Bernard had spoken of the immigration from the north-west of the Himalayas. That was an ethnic question in which he (Mr. Baines) took a great interest, but which he had specially excluded from his paper. He might cursorily remark, however, that he did not think that the Aryan immigration could have been a general or a large movement, owing to the nature of the route by which they had come. The race must have arrived gradually and in a small stream during a number of years. Their great development took place afterwards, when they had reached the Punjab. The Aryan race, in its comparative purity, was now, he thought, practically confined to certain classes in the North-West Provinces, Kashmír, the upper parts of the Punjab, Rajputána, and what was called by the natives Hindustan. The multiplication of the races in India was due to their mixture with, or their incorporation of the native black races. The characteristics of these black races were as traceable, physiologically, in the people of Bengal as the Dravidian was prominent in Madras. Referring to Sir W. Plowden's remarks, he said that he had been surprised to find that the Central Provinces had only

increased by about the general average; the birthplace return showed that there had been but little immigration, although it was perhaps, with Assam, the best field for agriculture in India. What there was consisted chiefly of the people from just over the border, and the women predominated in the proportion of 1,108 females to 1,000 males, showing there was no real migration. It was the same in Berár, where at the last census there had been a comparatively large immigration. This had now stopped, and it seems accordingly to have been only the results of famine elsewhere. Mr. Baines added that he did not propose to refer to the remarks of Mr. Hendriks, not from want of appreciation of their importance, but simply because they raised a very wide question, to go into which entailed quotation of so much detail that more time than was now at the speaker's disposal would be taken up in the discussion. He would conclude, therefore, by stating that the question was one which had not escaped his notice, and would, he hoped, be comprehensively dealt with in the review of the census results on which he was now officially engaged.

A cordial vote of thanks to Mr. Baines terminated the proceedings.

The REORGANISATION of our LABOUR DEPARTMENT.

By DAVID F. SCHLOSS, ESQ., M.A.

[Read before the Royal Statistical Society, 17th January, 1893.
The President, CHARLES BOOTH, ESQ., in the Chair.]

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I.—Introduction: the Organisation of our Labour Department.

On the 2nd March, 1886, a resolution, moved by the late Mr. Bradlaugh, was adopted by the House of Commons, "that in the opinion of this House immediate steps should be taken to ensure in this country the full and accurate collection and publication of labour statistics." Shortly afterwards the Board of Trade, at that time, as at the present, under the presidency of Mr. Mundella, accepted "from Parliament the commission of organising a Department for collecting and publishing labour statistics," having in view the following objects:—

1. To collect and arrange the statistics relating to wages which have been published in Parliamentary blue books during the last fifty or sixty years, with the addition of some prominent and authentic unofficial statistics which have been published from time to time, or which may be easily procurable, so as to furnish a tolerably complete picture of the progress of the community in respect of the earnings of the wages-receiving classes during the period in question.

- “ 2. To supplement these statistics by similar statistics regarding foreign
“ countries which have been published from time to time in the
“ reports of Her Majesty’s secretaries of legation and consuls, or
“ which the Board of Trade may be able to compile from the official
“ publications of foreign governments in their possession, with the
“ assistance to some extent of unofficial records containing authentic
“ data.
- “ 3. To collect and arrange similar statistics relating to the savings and
“ general conditions of the same classes, the prices of commodities,
“ and other matters in which the masses of the community are vitally
“ interested.
- “ 4. To make immediate arrangements for obtaining from time to time in
“ future a fuller record of wages, with special reference to hours of
“ labour, slackness or abundance of employment, and the proportion
“ of the wages-receiving classes at each rate of wage or earnings, than
“ has yet been procured in this country, and for the regular collection
“ and publication of such statistics from time to time.
- “ 5. To collect and arrange statistics as to prices, production, cost of living,
“ and other matters, which could either be embodied in the volume
“ containing a record of wages, or be published separately, as may be
“ found convenient. The same with an annual summary relating to
“ wages, prices, &c., in foreign countries.”¹

In connection with this new Department of the Board of Trade Mr. John Burnett, a trade union official enjoying the confidence and the esteem of the working classes, was appointed “Labour Correspondent to the Board of Trade,” and commenced his duties in October, 1886. The staff of the Labour Department has from time to time been strengthened, and there are now attached to it 13 clerks, one belonging to the Upper Second Division, the others belonging to what is commonly known as the Lower Division, 4 of these clerks being under the immediate orders of the Labour Correspondent, while the work of the Department is under the general supervision of Dr. Robert Giffen, the distinguished head of the Commercial Department.

II.—*The Work Done by our Labour Department.*

The work done by the Labour Department since its establishment has consisted in the preparation of the following documents; a memorandum on the immigration of foreigners into the United Kingdom, four Reports on Trade Unions covering the years 1886-90 inclusive, Returns of Wages published between 1830 and 1886, Report on the Short Time Movement in the Lancashire Cotton Trade (Departmental), Reports on the Sweating System at the East End of London and in Leeds, and on the condition of the nail makers and small chain makers in the Midlands, Rates of Wages in Belgium (extracted from a volume issued by the Belgian Labour Commission), Returns of expenditure by working men, Reports on the Strikes and Lock-outs of 1888-90, Returns of rates of wages in the Textile Trades, in Mines and Quarries, and of those

¹ See Return No. 48 of Session 2, 1886, and Return No. 433 of 1888.

paid to policemen and to persons engaged on roads and in gas and water works. The Board of Trade has also published a Report on the relation of wages in certain industries to the cost of production, a Parliamentary Return on hours of work, and a number of brief notices on various topics contributed to the "Board of Trade Journal," including short periodical reports on the state of the skilled labour market. The Board of Trade has also issued a Report on Profit-sharing, in regard to which it should be mentioned that, although this was a subject essentially concerning labour, the task of preparing this report could not be undertaken by Mr. Burnett or by any other official connected with the Labour Department; but, in consequence of that department being already intolerably over-worked, had to be handed over to an official of the Patent Office.

It must be added that Dr. Giffen, as head of the Commercial Department, has laid statistical information bearing upon labour questions before the Select Committees which have inquired into the Emigration and Immigration of foreigners, and into "the sweating system," and is about to assist in a similar manner the deliberations of the Labour Commission. Mr. Burnett, again, has given evidence before both of the Committees just named, and is one of the joint secretaries of the Labour Commission; he has also served on the Departmental Committee on manufacturing establishments in the Army, and has given advice to the Government in numerous cases in which the position of workmen doing the work of the State has had to be considered.

III.—*Inadequate Resources and Consequent Defects.*

That the Labour Department of the Board of Trade has done much good work is certain; and that, notwithstanding its very limited resources, so much should have been accomplished, is indeed a striking testimony to the zeal, industry, and ability of its slender staff. But there can be no question that the usefulness of this important institution would have been largely increased, had it not been that our Labour Department has from the first been consistently starved. Concerning the first of its Returns of Wages and its Report on Belgian Wages nothing need be said, these being mere compilations from existing documents. In regard to the Report on the relation of wages to cost of production, Mr. T. H. Elliott, by whom this report was prepared, observes, "that any complete and exhaustive investigation of the amount of the aggregate production of the leading industries of the country, and of the proportions in which the various constituents of production are combined, would be a task much in excess of the powers of a single individual." As a fact, all that could be done

under the circumstances was chiefly "the presentation in a suitable shape of the materials which lie embedded in official literature of various kinds, and are therefore at the disposal of any diligent student who chooses to search for them," and the results of Mr. Elliott's seven months' most zealous and painstaking industry "must," as he says, "necessarily be fragmentary and incomplete," simply because the resources at the disposal of the Department for the purpose of this extremely important inquiry consisted of Mr. Elliott and of Mr. Elliott alone. If now we turn to those cases in which the Department has undertaken original researches into labour questions, we shall easily see how far beyond its strength is the burden which we cast upon its utterly inadequate staff. Nor, indeed, is official reserve strong enough to veil the sense of injustice which is felt by those who are expected to make bricks, if not without straw, at any rate with a quite insufficient supply. Thus, for example, Dr. Giffen in the prefatory letter annexed to the Returns on wages in the principal textile trades, speaks of the "absence of a sufficient staff to execute the work with the speed desirable;" and again in the introduction to the Report on wages in mines and quarries, Dr. Giffen states that "the Department has still to regret that the small staff placed at its disposal has been unable to prepare for publication with the speed desirable the returns collected during 1886-88"—a remark which is certainly justifiable, seeing that these returns could not be published until the latter half of 1891. In regard to the Report on Trades Unions published annually by the Board of Trade, we find in the same way that, owing to the inadequacy of the staff at the disposal of the Labour Correspondent (clerks, no one of whom, of course, possesses the slightest familiarity with the peculiar and intricate terminology of trade unionism), the report for the year 1889 was not accessible to the public until 1892, when it came out together with that for 1890.

One point in regard to the inadequacy of the staff of the Labour Department demands special emphasis. Up to the present time we have been content to rely for information upon answers to circulars, eked out in some cases by cuttings from newspapers, and upon reports of trade unions when these could be obtained, but have not made any provision for investigation by agents on the spot. The result of our defective system of inquiry has been gravely to impair the efficiency of our Labour Department. Of the circular inquiry forms which the Department sends out a very large proportion are never returned at all, and those which are returned are often incomplete and not seldom inaccurate. Thus, when the Labour Department attempted to show us how the British working man spends his wages, and for that purpose sent

out to persons selected as specially likely to get them answered no less than 730 inquiry forms; 36 only of these were returned, of which "2 were so imperfectly filled in as to be of no value." Again, in preparing a census of British wages, the Department had, up to August, 1889, sent out 79,041 schedules, but had received replies to 10,681, or only 14 per cent. of this total; and some of the replies received were of such a nature that no use could be made of them. What is more, while the average of answers is only 14 per cent., in some trades the percentage goes down to an almost nominal figure. In "printing, dyeing, and bleaching cotton goods, &c.," the Department sent out 1,478 circulars, of which no more than 50 were returned; in "frillings," out of 23 sent forth, but 1 solitary circular found its way back to Whitehall. In "harmoniums and American organs," 29 circulars were sent out, whereof 1 only was returned; in the important industry of boot and shoe making, the Department got back no more than 110 circulars out of 1,533; in brass work and metal wares, 116 only out of 1,114; and so on. The Return of rates of wages in mines and quarries was based upon the replies sent to circulars issued by the Department, by far the greater part of which remained wholly unanswered; thus out of 1,910 circulars sent out in regard to coal, iron ore and iron-stone mines, 323 only were returned, leaving no less than 83 per cent. of the total unresponded to; in "metalliferous mines" 88 per cent. were unanswered; in respect to stone quarries the Department found that 84 per cent. of its schedules remained without any sort of reply. And the answers which did come in were extremely imperfect, "nearly every return," we are told, "having to be "written about on two or more points."

While it is undeniable that in its inquiries into merely statistical subjects the Labour Department has suffered most seriously from being unprovided with machinery for personal investigation, still more glaring are the defects which our present system has produced in regard to that extremely difficult and delicate task—the ascertainment of the facts in regard to strikes and lock-outs. Mr. Burnett, in his last Report, describing the industrial warfare of 1890, but published only in 1892, explains that the method adopted is to find out from the newspapers, and from trade union reports, "so far as they are obtainable," what labour disputes have occurred—there are, of course, not a few disputes of which the Department never hears at all, and then—so Mr. Burnett tells us:—

"An elaborate inquiry form is sent to the employer or employers concerned, "and another drawn on similar lines is forwarded to the workmen or workmen's organisation concerned in the dispute. It is upon the "information contained in these forms, as returned to the Board of

“Trade, upon which the statistics and conclusions of this report are built up, the actual figures and facts being reproduced in each case. Unfortunately, the whole of the persons to whom these forms are sent do not take the trouble to fill in and return them, so that under the present system of applying by post for information, satisfactory results are not obtained.

“Thus, while 1,240 forms of inquiry as to strikes were sent out to employers of labour and their associations having had such disputes with work-people during the year 1890, but 748 were duly filled in and returned, while letters of explanation or apology were received in 53 cases, making a total of 801 replies received, which is a percentage of 64·6 against 64·8 in the previous year and 56·4 in the year preceding that.

“Similarly in the case of the forms sent out to trade unions, a large proportion were not in any way acknowledged. In all 630 of the forms were sent to workmen or their organisations, but returns were only obtained from 349 of them, a proportion of but 55·4 per cent. as against 56·7 per cent. for the year 1889, and 49·5 per cent. in 1888.”

Thus only about half the forms are returned at all; “nor,” adds Mr. Burnett, “are all the forms returned filled in with such care and completeness as is desirable”—a delicate way of saying that many of them are so incomplete or confused as to be worthless. In respect to the large proportion of strikes in regard to which the circular system fails to obtain any information whatever, here, to use Mr. Burnett’s words, “no alternative is left but to take such information as may be otherwise available.” This is apparently an euphemism covering a free use of newspaper paragraphs—paragraphs which, if I may borrow the official language, are not in all cases written “with such care and completeness as is desirable.”

IV.—*Necessity for Investigation on the Spot.*

The proposition which, as one who has devoted many years to the investigation of facts in relation to labour, I venture to advance is that, if our Labour Department had been treated with greater liberality, so that it could have supplemented its issue of printed inquiry forms by investigations made upon the spot by expert agents, then most of the difficulties which have hitherto impeded the efficient discharge of its important functions would have been entirely avoided. So far as concerns the interrogatories relating to wages and to other matters which have been addressed to employers, and which, as has been seen, in so many cases have altogether failed to obtain any answer whatever, and in so many other cases have obtained only most imperfect answers, if the Department had been able to send to the spot its own trained investigator, not alone would the official expert have been able to show employers how to fill in their schedules, so that a huge mass of correspondence would have been dispensed with, but also—I am firmly convinced—the percentage of cases in which information was obtained would have been materially increased. In the first place, a personal interview

will satisfy many an employer, who "does not see what it is all about," that he is not being troubled without a good reason; in the next place, many an employer, who would hesitate to impose upon his clerks the labour of making out a return, will—such is the experience of myself and of others who have worked with Mr. Charles Booth—allow an investigator to get the figures out from his books. This method has been adopted upon a very extensive scale, both in America and in Europe, by the "field agents" of the splendidly organised Labour Department of the United States, and is certainly better adapted than any other to obtain the details requisite for the purposes of the investigation.

With regard to printed questions addressed to working men, the necessity for rendering assistance in filling in the answers to inquiry circulars is even more obvious. For the most part, the labour of writing is highly distasteful to working men; they are not accustomed to receiving communications of this nature, and they are often incapable of giving precise expression to their thoughts with the pen. Even the experienced officials of the most highly-organised trades unions "shy at" the task of replying to circulars. "Mr. Burnett," said the very able secretary of one of the most perfect and powerful unions in the country to me, "is constantly sending me requests for information. If I have anything to hand already in print that seems to bear upon the subject, I put it in an envelope and send it to him. If not, I leave the thing alone. My time belongs to my Society, and can not be devoted to writing answers to the Labour Department." "But," I asked him, "if they sent a man to talk to you, would you not give him information?" "Certainly," was the reply, "I would always be glad to have half an hour's straight talk with anyone whom Mr. Burnett might send to me." What is more, it should never be forgotten that, whether it be workmen or their masters from whom information is sought, one radical defect of the circular method is the extreme difficulty of making sure that your interrogatories cover the whole ground. The answer to one question almost invariably suggests another, which until that moment had not occurred to the investigator; while, under the system of written inquiries, nothing in the nature of cross-examination is possible. No one who has ever had to ascertain facts in relation to labour will deny that there are very many cases in which, for the purpose of getting at the truth, "half an hour's straight talk" is worth a ton of inquiry forms.

For these reasons I earnestly desire that our reorganised Labour Department shall have at its disposal, as have all other well-organised Labour Departments, such as exist in the United States and in France, the services of competent persons, who shall

be entrusted with the task of elucidating the various subjects from time to time under investigation by means of personal inquiries made on the spot. In support of this view I cannot do better than refer to the opinion repeatedly expressed by Mr. Carroll D. Wright, the eminent head of the American Department of Labour. Thus, in the "Cosmopolitan Magazine" for June, 1892, Mr. Wright, says:—

"The information under any investigation is usually collected on properly prepared schedules of inquiry in the hands of expert special agents, by which means only the information which pertains to an investigation is secured. Rambling and nebulous observations, which would be likely to result from an investigation carried on by inquiries not properly scheduled, are thus avoided. The great advantages of this method have been demonstrated by many years of experience. Sometimes the peculiar conditions accompanying an investigation admit of the use of the mail, but as a rule the attempt to collect information upon any given subject under investigation through the mail has proved a failure. With properly instructed special agents, who secure exactly the information required, who are on the spot to make any explanation to parties from whom data are sought, and who can consult the books of account at the establishment under investigation, the best and most accurate information can be secured."

V.—*Necessity for Prompt Publication of Information.*

The next point to insist upon is that the information obtained by the Department shall be published at the earliest possible moment. Things now move so fast that even the most accurate account of the wages received and hours worked in a trade three or four years ago is often of no use whatever as a clue to the conditions prevalent to-day. And if, in regard to the labour movement generally, stale news is no news, there is one important class of information the prompt publication of which is nothing less than a paramount necessity. The details with which the Board of Trade supplies the public in relation to strikes and lock-outs are not only of a very imperfect character, being, as already explained, based upon very inadequate data, but are published only after a period of from one to two years has elapsed since the occurrences to which these belated reports refer. This delay is most regrettable; for, in truth, the report of the Labour Department upon an industrial dispute ought, by rights, to come rather before the outbreak than, as at present, long after the termination of hostilities. There are, I mean, very many important trade disputes which arise, not suddenly, but after long notice; and in these cases there would be ample time for the Labour Department, reorganised upon the lines here laid down, to anticipate the culmination of the quarrel by the publication of a report based on the inquiries made on the spot by its own investigator, a step which, by placing the matters at issue in the clearest

possible light before the masters and the men and before the public generally, would—it may be hoped—not inconsiderably facilitate the equitable and pacific adjustment of the dispute. Nor, in those cases in which it may prove impracticable to investigate and report until after a strike has actually broken out, can any measure be suggested better suited to bring about a speedy and satisfactory settlement than the issue of a fair account of all the sides of the question drawn up by an expert of recognised authority—a proposition which, it is important to note, is borne out by the recent remarks of a man peculiarly qualified to form correct views upon this subject, Mr. Burt, M.P., who says, “Advantage might accrue from careful inquiry and the issuing of a report, even where one side only was favourable to arbitration.” (“Nineteenth Century,” December, 1892, p. 869.) Even where all efforts to shorten the duration of the conflict have, unfortunately, proved unsuccessful, who can doubt that the publication by the Labour Department of a complete, accurate, and impartial report, drawn up by its competent investigator, and given to the world while the misery and the loss caused by a strike fought out to the bitter end are still fresh in the minds of the public, will avail to suggest to employers and employed most valuable lessons, and will in no small degree contribute to the avoidance in the future of recourse to the terrible ordeal of industrial warfare?

VI.—*Proposed Appointment of Local Labour Correspondents: their Principal Functions.*

Coming now to the definite and detailed proposals for the reorganisation of our Labour Department, which I desire to submit for consideration, I shall begin by suggesting that the Board of Trade shall appoint in each industrial district a “Local Labour Correspondent.” There would thus be, subordinate to Mr. Burnett at Whitehall, local agents stationed at Plymouth, Cardiff, Birmingham, Hull, Manchester, Newcastle, Glasgow, and Dublin, respectively; a ninth for the metropolis must be added—with an office in Mile End. For Mr. Burnett will no doubt find that the task of organisation and supervision fully occupies his time. Each of the different local investigators will require the services of a clerk, who shall be found at all times in the office. What, then, will be the nature of the work which these branches of the Labour Department will be expected to perform? A considerable part of their work will consist in assisting the central office in the collection of statistics relating to wages, to the cost of living, and to cost of production, in investigating the details of trade union organisation, in obtaining prompt and accurate information in regard to industrial disputes, and, generally, in carrying out inquiries in relation to

labour questions demanding special local examination. I should like to add that the work done by Mr. Charles Booth and his assistants in regard to London, and by the same gentleman in connection with Mr. Arthur Acland, M.P., in relation to certain country districts, is work which ought not to be left to private individuals to perform, simply because—to put it bluntly—there are not enough Charles Booths and Arthur Aclands “to go round.” That we should possess trustworthy information as to the life and labour of the working classes in the different parts of the kingdom, as to the migration of labour, and so on, is extremely necessary. It is, indeed, fortunate that the exceptional industry and extraordinary generosity of private individuals should have given us, as it were, sample instalments; but if their excellent work is to be continued upon an adequate scale, it is clear that the task must be taken over by a properly equipped State department. And in the performance of this task the local labour correspondents will render indispensable services.

VII.—*Function of Local Labour Correspondents in regard to the Question of Employment.*

Without pretending to exhaust the varied sphere of activity which awaits the energies of a reorganised Labour Department, possessing, as I have suggested, eyes and ears throughout the country, I wish to point out that the adoption of my proposals will do much to secure for us in respect to the very important question of the unemployed information vastly more complete than the wholly insufficient data with which we are now, perforce, contented. The memorandum upon the state of the Labour Market which the Board of Trade publishes once a month, does not profess to deal with any but skilled and organised labour, leaving the great army of the unskilled, on the one hand, and the large number of skilled workers who do not belong to a trade union, including nearly all our female operatives, on the other hand, entirely out of consideration. Even in regard to the skilled and organised workers the memorandum is deplorably inadequate, 22 trade unions, with a membership of less than 300,000, alone sending in returns; and, while the memorandum does not distinguish between different branches of the same trade, *e.g.*, between pattern-makers and fitters in the engineering trade, this unsatisfactory document lumps together all the returns received, so that it is impossible to know the proportion of unemployed in each of the separate industries referred to. At the same time, it should be noted that, as has been recently pointed out by Mr. John Burns, M.P., nothing at all is said in regard to that class of workers, unfortunately numerous, who being employed on piece-wage in a “season”

trade, are often, although technically "employed," in fact, to a large extent, unemployed, since their trade is so "slack" that these workmen and workwomen are getting only four days', or even two days', or less work per week. That we ought to take steps to improve our existing method of obtaining information as to the employment of our workpeople will scarcely be denied.

In relation to this question of the unemployed and to the functions which I desire to see fulfilled by the local labour offices under the Board of Trade, I should like to make it clear that I do not propose that these offices shall take any part whatever in finding employment for men out of work. The highly important duty of bringing masters and men together will—I think we may take it for certain—be performed by local labour registries, established either by charitable associations or individuals (as at Egham, Ipswich, and a considerable number of other places), or by local authorities (as at Chelsea, Battersea, and elsewhere). Where the duty of the State begins, is at the point at which it becomes necessary to connect with each other the different labour registries which will before long have been instituted either by voluntary efforts or by the action of vestries, municipalities, county councils, or other public authorities throughout the country. What I purpose is that every labour registry shall daily send in returns—I should wish the use of the wires given free for this purpose by the Post Office—to the office of the local labour correspondent for the district. Take the proposed labour information office at Manchester. Every afternoon the clerk in charge of that office receives code telegrams from Oldham, Burnley, Hyde, Stockport, Macclesfield, Warrington, St. Helens, &c., &c., informing him of the number of men wanting work, and the number of men required by employers in each trade at each of these places. This information he tabulates, sending one copy of his "Labour Market Report" to every labour registry in the district, one to Whitehall, and others to the offices of the principal local newspapers. Next day the carpenter who can get nothing to do at Oldham knows from the "Market Report" for the Manchester district, which he consults at the Oldham Labour Registry, that he can get a job by going to St. Helens. At the end of the week the "Labour Journal" (which I propose shall be published weekly by the Board of Trade) will contain an analysis of all the returns of all the registries throughout the United Kingdom; so that the glass-worker at St. Helens, who perhaps has tried for work at Warrington and failed to get it, may know that he is wanted at Seaham Harbour or at Hackney Wick. It is probable that some time will elapse before the network of labour registries is fully developed; and in the meantime the local correspondents of the Board of Trade will

in some districts be obliged to depend to a considerable extent for their information as to the state of the labour market upon such details as they are able to gather from the secretaries (general and branch) of the trade unions and from such other sources as may be available—details which will, of course, be far less perfect than those which will be obtained after the map has been dotted all over with labour registries, but which will, at any rate, be infinitely superior to the meagre and misleading statistics now published by the Board of Trade.

Another provision which I should like to see made, and which will be of especial value in those districts in which a labour registry has not yet been opened, is that every post office in the Kingdom shall be allowed to become a centre of labour information. I do not mean that any postmaster shall take any action whatever in bringing master and man together. All that will be asked of this official—say, the postmaster of Saddleworth—will be to place in a position accessible to all comers the “Labour Market Report” tabulating the offers of and demands for labour in the Manchester district, which he will receive every morning from the local labour correspondent stationed in that city, and also the “Labour Journal,” which he will get down from Whitehall once a week. Already our postmasters give publicity to official details in respect to the demand for labour in our Colonies, by exhibiting a poster supplied from the Emigrants’ Information Office in Westminster. Is it too much to ask that what is done for Canada or Tasmania shall be done for the different parts of the United Kingdom? Certainly, in addition to its great practical advantages, the plan which I suggest would enable the Board of Trade to give to the public, upon this important question of employment, information of a character infinitely superior to the slipshod and scrappy statistics with which alone it is at present possible for our shamefully starved Labour Department to provide us; while the practical advantage to be derived from the establishment of what would virtually constitute a complete system of labour exchange throughout the Kingdom would indisputably be very great.

VIII.—*Necessity for strengthening the Headquarters Staff of the Department.*

While I do not conceal from myself that my proposals as to the establishment of local branches of the Labour Department are by no means certain to meet with immediate and universal approval, there is one subject about which no difference of opinion will exist—the absolute necessity for strengthening without delay the headquarters’ staff at Whitehall. The nature, however, of the increase to be made in the central staff will, of course, depend to a great

extent upon the acceptance or rejection of my proposal for the establishment of branch offices. Assuming this proposal to be adopted, we must take into account, on the one hand, the considerable saving in routine work which will thus be effected for the benefit of the Whitehall staff, and, on the other, the large additional amount of information which the local correspondents will acquire, all of which will ultimately have to be dealt with by the officials at headquarters. Thus, while the proposed local labour correspondents are busy collecting information as to wages, as to trade disputes, as to the state of the labour market, and as to such other matters as they may be instructed to examine, the central office of the reorganised Labour Department will sift, tabulate, analyse, and digest the mass of material thus obtained; will, in the first place, publish the weekly "Labour Journal" containing all such details as require to be given to the public with special dispatch, especially details in regard to the state of the labour market and to impending or existing trade disputes; and will, in the second place, from time to time bring out carefully prepared reports dealing in an exhaustive manner with the different questions which the Department is called upon to investigate. For these purposes a considerable addition must be made to the clerical staff, which ought in future to include a few men conversant with trade union organisation, with the various methods of wage payment and, generally, with the actualities of industrial life. It is also highly desirable that among the new *personnel* of the Department there shall be included one or two experts acquainted with labour questions, possessing a fair knowledge of economics, accustomed to handle statistical details and competent to put together in a lucid and readable form the vast volume of material which will have to be dealt with by the Department. I think, too, that our new Labour Department should be allowed to engage temporarily, as occasion may require, the services of persons of approved capability, who shall make, under the instructions of the Department, special studies of intricate and difficult questions demanding special examination by trained investigators and economists.

Before leaving the subject of the extension of the staff attached to the headquarters of the Labour Department, I desire to call attention to the great advantage which would accrue, if that Department were enabled to pursue its researches, especially into such questions as the cost of production, the standard of wages, the cost of living, and the progress of manual training and technical education in foreign countries as well as at home. English commerce has to fight for its life against the industry of the whole wide world; and it is of the utmost practical importance that our working classes, in particular, and the people of England, generally,

shall have at their disposal the fullest and most accurate information in regard to the industrial position of our competitors, information which can then only be satisfactorily furnished if we, following the example set us by the United States and by France, shall send forth the expert investigators of our Labour Department to make personal inquiries on the spot in foreign countries.

IX.—*Proposed Creation of National Labour Council.*

The next suggestion which I have to make is the creation of a consultative body in connection with the Labour Department, a permanent Labour Commission, analogous to the *Conseil Supérieur du Travail* recently established in France and in Belgium. The proposed National Labour Council would consist of twelve members, four delegated on behalf of employers, four representing working men, and four trained economists and labour experts. It may be found convenient that the members of the new National Labour Council shall be appointed temporarily, in the first instance, by the Government; but, afterwards, the first four might be named by the Associated Chambers of Commerce, the second four might be elected by the Trade Union Congress or nominated by the Parliamentary Committee of that Congress, the four experts being co-opted by the other eight members. All such appointments would be from year to year; but I have no doubt that the members will, as a rule, be re-appointed, so that a desirable degree of continuity will be preserved. The National Labour Council will meet once a quarter, for a week each time, unless sittings at more frequent intervals or of longer duration are found to be required. I am convinced that the creation of a body such as I have indicated—a body possessing no legislative functions, but studying important questions in regard to the conditions of industry and to the demands of the industrial classes by the light of evidence systematically collected by a liberally-equipped Labour Department—would be capable of formulating conclusions of the very greatest value, and that its deliberations would possess a high degree of interest for the nation at large, and would render most material assistance to those into whose hands the nation has confided the government of the country.

X.—*Proposed Affiliation of Local Labour Councils.*

Another proposal which I venture to make is the formation of local labour councils, composed in equal numbers of employers and employed. I do not propose that these local councils shall be organised by the Board of Trade. But I am desirous that, wherever such councils shall be voluntarily formed, these bodies

shall receive official recognition, and shall be permitted to bring to the notice of the Labour Department matters affecting their respective districts. I believe that these local councils will have a good effect in creating all over the country an interest in the work of the Department, and will foster a readiness on the part of employers and employed to supply that department with information. At the same time, these councils will be in a position to call the attention of the Department, and through the Department, of the Government to industrial conditions prevalent in their respective districts which demand either the stricter enforcement of existing, or the enactment of novel legislation. It is part of my scheme that in all places in which a Board of Conciliation, such as those already formed by the Chambers of Commerce in London, Liverpool, Manchester, Leeds, Bristol, Bradford, and numerous other towns,² shall be in existence, that Conciliation Board shall be the Local Labour Council for the district. It may well be that the adoption of a scheme which, while it provides for the prompt publication of full and impartial accounts of the causes of difference arising between employers and employed, would strongly tend to bring about the voluntary formation throughout the Kingdom of joint councils of masters and men, and which includes the establishment by the State of a National Labour Council, competent, if called upon by the parties, to act as the supreme court of appeal in trade disputes, is the most efficacious measure which it is practicable for the Government of the nation to adopt for the promotion of industrial peace.

XI.—*Justification of Increased Expenditure entailed by Scheme.*

There still remains to be considered the important question of cost—a question which I shall not attempt to shirk by underestimating the increased expenditure entailed by the scheme now brought forward. The proposed local labour councils will receive no subvention from the State. On the other hand, the members of the National Labour Council, whose duties will be of a more arduous and responsible nature, and who, when they come up to London to attend the quarterly meetings, will have to incur expense for railway tickets and for lodgings, will receive a small

² Mr. S. B. Boulton, the chairman of the Labour Conciliation Board formed by the London Chamber of Commerce, in his evidence given on 29th November, 1892, before the Labour Commission, mentioned as towns which either have formed, or are in the process of forming, similar boards—"Liverpool, Wolverhampton, Aberdeen, Bristol, Dublin, Greenwich, Grimsby, Bradford, Edinburgh, Leeds, Rochdale, Hull, Derby, Gloucester, Cardiff, Dundee, Nottingham, Glasgow, Manchester, Worcester, Walsall, Exeter, Plymouth, Morley, Croydon, Dudley, Halifax, Keighley, Wrexham, Wakefield, and Newport, Monmouthshire."

honorarium. The establishment of the suggested local labour information offices cannot be carried out without a considerable outlay; while the necessary extension of the headquarters staff at Whitehall, together with the amount of stationery and printing which will be required, will add largely to the total cost of the reorganisation. But if we are to have an efficient Labour Department, then we must face the fact that maintaining an institution of that character costs a good deal of money. The United States spend over 35,000*l.* a year upon their Labour Department—entirely exclusive of its printing bill. We in this country are not likely to spend anything approaching to this amount. But we might well be willing to defray the expenses of a Labour Department equipped upon somewhat the same scale as that which exists in France.³ The French Labour Department, formed some two years ago upon lines generally identical with those laid down in this paper, had allotted to it in the last budget a sum considerably exceeding 7,000*l.*; but in consequence of its rapid development this grant will in the future have to be largely increased. It must not be forgotten that the French enjoy this advantage over us, that in the Prefects holding office in the different parts of the country they possess a ready made system of local correspondents—an advantage which materially decreases the expenditure necessary in order to keep the *Office du Travail* working up to a high standard of efficiency. If, then, we are prepared to reorganise our Labour Department upon the scale which I have indicated, we shall have to provide between 7,000*l.* and 8,000*l.*⁴ a year, an amount adequate to cover the normal expenditure (save for stationery and printing) involved by the adoption in their entirety of all the various proposals which I have ventured to make.

It should be remembered that the expenditure involved by the adoption of a plan for the reorganisation upon wider lines of our Labour Department will to a very considerable extent be recouped by the saving in another direction, which this scheme will effect. We are constantly referring questions to Parliamentary Committees and to Royal Commissions; and in many cases these inquiries entail a very considerable expenditure. Now, while, under the plan advocated on the present occasion, we shall in all suitable cases hand over to our reorganised Labour Department the task of investigation hitherto entrusted to casual committees and commis-

³ The organisation of the French Labour Department is described in detail in the Appendix.

⁴ Made up as follows:—Strengthening present Headquarters Staff, about 2,500*l.*—2,800*l.*; Local Labour Correspondents, their travelling expenses, clerks, offices, &c., say 4,500*l.*; National Labour Council, 600*l.* The estimate does not include the cost of any special inquiries (at home or abroad) which may from time to time be ordered.

sions, this task will thus be performed with far greater efficiency than is possible under our present system. For, of course, neither Parliamentary Committees nor Royal Commissions are provided with suitable machinery for obtaining information of a statistical nature really covering the whole field; nor do these bodies, as a rule, possess any means of making local investigations, their sole source of information, for the most part, consisting in the examination of such witnesses as find their way to the room at Westminster; while, at the same time, the facts brought to light are seldom presented to the public in the same scientific and intelligible form as would be the case were this information obtained, tabulated, analysed, and digested by the expert staff of a competently equipped Labour Department. So much as to the collection and presentation of evidence in relation to labour. With respect to that other and very important function of Select Committees and Royal Commissions, the formulation of conclusions and recommendations, I believe that the opinion of the National Labour Council—a picked group of experienced men, selected to represent employers and employed—will deservedly command so large a measure of public confidence, that in the majority of instances we shall entrust to this Council, in preference to any other body whatever, the duty of tendering advice in regard to labour questions. In those cases, however, in which such questions may in the future be referred to a committee or a commission, this outside tribunal will find in special reports prepared for the purpose by the Labour Department—reports founded upon a thoroughly systematic investigation, and setting forth all the facts, but containing no conclusions—a most convenient basis for their deliberations; and in this manner, while the cost of the inquiry will be materially lower than at present, much additional cogency will, undoubtedly, be possessed by the recommendations which the committee or commission may think fit to make.

XII.—*Conclusion.*

To sum up, let me recapitulate the main features of my scheme for the reorganisation of our Labour Department. These are:—

- (i.) An increase in the strength of the present Headquarters Staff.
- (ii.) The appointment of Local Labour Correspondents.
- (iii.) The creation in connection with the Labour Department of a National Labour Council.
- (iv.) The affiliation to that Department of Local Labour Councils.

That the cost of carrying out this scheme in its entirety will be considerable is fully admitted. But to incurring that cost no serious objection will be raised, if only we feel certain that the practical advantages to be gained by reorganising our Labour Department upon the lines indicated will amply justify the increased expenditure required. And of this—it is submitted—no doubt can exist. To place at the disposal of all classes of the community accurate knowledge in respect to these labour questions, upon the correct solution of which the welfare of the nation is so largely dependent; to facilitate, by the diffusion of information as to the labour market, the search for employment; to promote the pacific settlement upon equitable terms of industrial disputes; to guide, by the light of indisputable facts and figures, the demands of the working classes, whether these demands be addressed to their employers or to the legislature, and to demonstrate with precision how far it may be possible and prudent to comply with these demands—these are objects to secure the attainment of which we shall all feel that no pains should be spared, and no reasonable outlay of money should be grudged.

APPENDIX.

I.—*Note by the Present Writer, reprinted (by permission of the Editor) from "Economic Journal," June, 1892.*

Towards the end of 1890 the French Government created a permanent Labour Commission (*Conseil supérieur du Travail*), whose duty it is to advise the Cabinet in regard to matters immediately concerning the welfare of the industrial classes. The forty-five members of the Commission are nominated by the Minister of Commerce, one-third being employers, one-third workmen, and the remaining third deputies, senators, statisticians, or other experts; in addition, the heads of the principal departments of the Ministry of Commerce have seats. The unofficial members receive 200 frs. apiece for every session of the Commission which they attend, each session extending over ten days; an annual sum of 25,000 frs. is allowed for printing and other expenses. It is intended that two sessions shall be held in each year; but the Commission met once only in 1891, in February, when four subjects were discussed—arbitration in trade disputes, employment agencies, the periodical payment of wages and the protection of wages against creditors, and the establishment of a Labour Bureau. The project of establishing a Labour Bureau, whose duty it should be to collect and to publish information concerning the conditions of labour, the relations between labour and capital, the hours of labour, and the wages of the working classes, was approved by the Commission; and a Bill for this purpose was brought in and passed. The *Office du Travail*, which commenced its work in October, 1891, is under the management of a director, receiving a salary of 12,000 to 18,000 frs., with a considerable staff of subordinate officials, clerks, and messengers. Auxiliary to this "internal" staff the Labour Bureau possesses three "permanent delegates," with salaries of from 4,000 to 7,000 frs., and has the right to employ, as occasion shall require, the services of special "temporary delegates." Provision is also made for temporarily attaching to this Bureau officials of other State departments. The "internal" branch of the Bureau is divided into two sections, of which the first collects information, whilst the second analyses, digests, and superintends the publication of this information. The Bureau has recently been enlarged by taking over from the

Ministry of Commerce a section dealing with general statistics, and the total number of persons permanently attached to it is now twenty-eight. The amount voted this year for the expenses of the *Office du Travail* is 152,000 frs.; but, in consequence of its rapid extension, a large increase in this vote will be necessary.

The Director of the Bureau is M. Lax, for many years the chief of the railway department of the Ministry of Public Works. The head of the section of industrial statistics, M. Fontaine, and his assistant, M. Toqué, are both engineers; while the second section, which digests these statistics, is presided over by M. Finance, formerly a journeyman painter, well known as an advocate of industrial reform upon non-revolutionary lines, with the assistance of M. Jeannolle, who was an assistant-inspector of factories, also a devoted student of questions affecting the working classes. The special duty of the actuary attached to the Bureau will be to investigate the relative rates of disease and of death in different occupations, and to report upon the statistics of accidents in mines, factories, &c.

The work performed by the French Labour Bureau is generally of the same nature as that carried out by the Labour Department of our Board of Trade. As with us, a great number of the circulars sent out with the object of obtaining information fail to elicit any response. On the other hand, in the prefects of the Departments the French have a source of information not possessed by us. But the principal advantage possessed by the Labour Bureau in France is the provision made for personal inquiries conducted on the spot by special agents, either "permanent" or "temporary" delegates of the *Office du Travail*, or by officials in one or other branch of the public services. One of the permanent delegates (who are Government servants, and are not allowed to follow any subsidiary employment) is M. Corra, a distinguished journalist, whose studies of social questions enjoy a high reputation; the second of these delegates is an engineer, the third is a doctor. Special local inquiries have been conducted by these permanent delegates in respect to the Eight Hours Movement, and the question of employment agencies; they have studied on the spot the popular banks in Italy, the factory legislation of Germany, and other subjects both in France and abroad, and have drawn up reports. The temporary delegates (who receive a fee for each investigation, but are not debarred from taking private employment) are experts selected for their special acquaintance with the matter in hand. Local inquiries, sometimes in France, at other times in foreign countries, have been conducted by specialists on behalf of the Labour Bureau in relation to several of the subjects also investigated by the permanent staff, and in relation to other

questions, such as the hours of labour, the silk industry, and the price of food-stuffs in certain districts.

The *Office du Travail* will publish a monthly *Bulletin* containing all such details as are ripe for immediate publication, and is also understood to intend issuing from time to time special reports on subjects of interest, which will be sent out as soon as their preparation can be completed.

II.—*Later Details.*

Since the account given above was published, the *Conseil supérieur du Travail* has held another session, at the end of June and beginning of July, 1892, when it discussed reports on factory and workshop regulations, on people's banks, on co-operative loan societies, on the museum of social economy, and on the housing of the working classes. The Council having called attention to the desirability of this step, the idea, entertained from the first, of creating a permanent executive committee of the *Conseil supérieur* was in October, 1892, carried out by the appointment of the *Commission permanente*, composed of twenty members chosen by the Minister of Commerce from among the members of the *Conseil*. The members nominated are five working men, five employers, five members of either branch of the Legislature, and five statisticians or other experts. This executive committee is to meet once a week. It is likely that a salary, probably of 20 to 25 frs. a day, will be allotted to the working men members; but this matter has not yet been decided. It will be the duty of the *Commission permanente* to forward the work of the Higher Council by making preliminary researches into matters about to come before it, by organising such inquiries as may be necessary in order to enable the Council to arrive at a conclusion in respect of reports presented to it and found to require fuller consideration, and by elaborating the details incidental to recommendations made by that body. The *Commission* may also be called upon to assist the Minister of Commerce by its advice on labour questions, legislation affecting the working classes and similar subjects. At the present time the *Commission* is studying the question of people's banks, brought before the Higher Council at its last sittings.

The *Office du Travail* has published a report upon the statistics of accidents resulting in injuries to workmen and a most complete and valuable monograph dealing with the question of employment agencies; and has in the press a report upon the financial results of

compulsory workmen's insurance in Germany and Austria, another dealing in a very exhaustive manner with the subject of industrial conciliation and arbitration, an account of the industrial conflicts of 1890 and 1891 and a report on the wages and hours of labour of French workpeople. In addition, the same gentleman (M. Corra), to whom was entrusted the task of collecting the necessary facts in relation to the question of employment agencies, is about to undertake a detailed investigation into trade associations and labour exchanges; while the section which prepared the report on conciliation and arbitration is now to study and make a report upon the French benefit societies (*Sociétés de secours mutuels*).

DISCUSSION on MR. SCHLOSS'S PAPER.

THE PRESIDENT, in opening the discussion, wished to call attention to the extreme importance of the subject, which was peculiarly imminent just now, for they had been told in the public newspapers that immediate action was likely to be taken in this direction, and in any case no one could doubt but that some such improvement would follow the report of the Labour Commission. Both that commission and the Board of Trade were represented this evening, but the gentlemen representing these departments were necessarily tongue-tied. He had himself had the advantage of hearing the author's scheme sketched out six months ago, and since then some changes had been introduced into it which, in his opinion, materially strengthened it. He noticed especially that in the original proposal Mr. Schloss had not made the local labour correspondents the entire servants of the public, but merely private individuals taking a small fee to devote a certain portion of their time to these inquiries. He thought it a great improvement, though it would add somewhat to the cost, that they should be servants of the department. With nine really efficient men scattered over the country and reporting to head quarters, much greater results would be secured than with semi-voluntary assistants only. That there would be a strong central office he had no doubt, and the main question was how that central office would get the information required. The further suggestion of Mr. Schloss that these centres should be connected with employment labour bureaux was also a most valuable one.

Mr. GEORGE HOWELL, M.P., said that as perhaps the first in this country to make a representation to Government, about 1869 or 1870, with regard to the necessity of some such department, he would like to make a few remarks. The idea which he then conceived, and which had then been partially adopted in the United

States, was by no means carried out under the existing system. He could not quite agree with what Mr. Schloss and others said by way of apology for the Labour Department of the Board of Trade; he thought that this department had not done sufficient work even with the staff it had. He knew of one gentleman in that room to-night who, he ventured to say, had by himself done more in the way of tabulating statistics than had been done, speaking generally, by the Labour Department. For instance, taking the volume mentioned by Mr. Schloss as having required two years to publish, once the first volume had been issued (and he granted that this entailed a good deal of trouble) the work necessary to continue the statistics would not demand the labour of one man for one month. In numerous instances he had himself prepared year by year statistics nearly six months in advance of the volume published by the Labour Department. They were now in the middle of January, 1893, and the report for 1891 was not yet out. He would not throw the blame on Mr. Burnett, for that gentleman, he knew, if it depended on him, would have been prepared to issue the volume some months ago. The great difficulty was that the Labour Department was subordinate to all the others, and this was mainly the reason of his own refusal when Mr. Mundella did him the honour to offer him the post now occupied by Mr. Burnett. He felt certain that until the department ceased to be a secondary one, the ideas suggested in the paper would never be fully carried out. He was much afraid that the labour council proposed by Mr. Schloss would very soon prove to be in a position of antagonism to the Government of the day. If they had to advise, they must do so precisely in the same way that royal commissions and select committees did now. So far as investigation was concerned these committees, he thought, served their purpose admirably, but the Government seldom saw their way to adopt the recommendations made. He was inclined to think that the best plan after all would be to confine the duties of the Labour Department here, as in the United States, to the collection and prompt publication of accurate and wide reaching information on all points connected with labour, leaving political parties to formulate the measures required. He was not sure that the subordinate councils would fit in with the national council. Unless the local councils were dependent in some way on the Board of Trade or the Labour Department, there would be no hold on them, either with regard to the supply of information or otherwise. He fully agreed with the author of the paper as to the necessity of the speedy collection and publication of information. He could say that trade union secretaries were admirably fitted to formulate and transmit all the intelligence necessary for the compilation of the reports. One important point was that trade unions were not bound to send in reports; many did so, but he should like to call attention to the fact that the reports of the Registrar of Friendly Societies contained a mass of information which was not embodied in the reports published by the Board of Trade. It was not until some pressure had been brought to bear on them that a double volume was published containing some portion of this information. No one seemed to

have had the pluck to investigate the masses of reports which had lain for twenty years in the cellars of the Registrar of Friendly Societies. He was glad to see that in the last volume issued by the registrar there was fuller information on the condition of the trade unions than they had hitherto been in the habit of publishing. The next point was that they must have not only a competent man like Mr. Burnett at the head of affairs, but also practical competent men as his assistants throughout the country. That such men were to be found was evident from the number of efficient secretaries of various trade unions. Mr. Schloss, speaking of the method in which the information was at present collected, had remarked that these secretaries had their own work to do, which could not be thrown aside for Government work without inducement. Why should they not be paid? He desired to see the Labour Department so strengthened as to make it really useful to this great industrial country; and in order that it might be so, they must have full and accurate information obtained on the spot when necessary, and a complete re-cast of a great deal of the statistical information now buried in blue books. To show what could be done in this direction, he need only mention what had been done by individual men, such as the Chairman, or (in a different way, perhaps) Mr. Henry Mayhew some years ago. Such work was the work of the nation, and what had been done by one individual could be multiplied a thousand times when done by Government, and to do this there ought not to be any question about devoting a paltry 7,000*l.* or 8,000*l.* a year to these purposes.

The Right Hon. Lord THRING said that he could not state too strongly his belief that the time had come when almost everything in relation to the poor and in relation to labour questions depended on accurate information. He agreed that if they could get a department which would labour in the public interest as much as their President had done in his private capacity, they would obtain everything which could be required. He did not think that Mr. Schloss intended to press his scheme with regard to a national council as far as Mr. Howell imagined. What he conceived Mr. Schloss to mean was first to lay the foundation of an investigating department to obtain and disseminate accurate knowledge, and then the rest would follow. It would *then* be advisable that a central national council and affiliated local councils, if possible, should be formed; but the establishment of such councils would seem to be a consequence and not strictly a part of Mr. Schloss's scheme. He agreed that it would be best at first to confine themselves to acquiring accurate information. With regard to royal commissions and committees, he thought that as an old hand he must say a good word for them. They often elicited very valuable information, even when they were House of Lords committees, and he would especially mention the Poor Law Commission presided over by Lord Kimberley. He was not one of those who believed that there was antagonism between the different classes, but he was sure that each class knew the other now far better than formerly, because they had so much more accurate

information. They knew better the feelings which animated one another. Some of the doctrines advocated by the trade unions might be right or wrong, but they had learnt now that trade unions were not what they were considered to be thirty years ago, nests of sedition. They would be greatly indebted to Government for making a movement towards obtaining further information, and he believed that as the knowledge of what was going on in every class increased, there was a future for England such as had never been known before.

Mr. F. DEBENHAM said that his only claim to speak lay in the great interest he took with everyone else in labour questions, more especially as he had the honour to belong to a public body where this question was now very much to the front, and where the new independent Labour Party was very decidedly represented. He thoroughly agreed with what Mr. Howell had said with regard to the general scope of the paper, but he doubted whether it was sufficiently practical in its general bearings. It seemed to him that some of the suggestions pointed to a system of centralisation which under any form was always more or less repugnant to the feelings of Englishmen of all classes. A more valuable suggestion, he thought, was Mr. Schloss's proposal for the appointment of labour inspectors in different districts to collect information. The department should confine itself to this work of collecting information, and not pose as a Government office to interfere with or attempt to regulate the conditions of labour generally. With regard to the suggestion that a man should be enabled to transfer his labour from one district to another as fast as the telegraph could tell him where he was wanted, he thought that this would entail too much expense to the workman, and that it would be much more advantageous for him to be able to localise his labour, and thus to render it as far as possible continuous. He would much prefer to see the free libraries rather than the post offices utilised for the purpose of disseminating information about labour. Free libraries as yet were few in number, but where they did exist they were already to a great extent labour bureaux, for early in the morning they were filled with men in search of employment looking through the advertisements in the daily papers; they could also see there the blue books and other official papers published from time to time. Mr. Howell had asked who was to be blamed because the Labour Department had not done all it should do. He (Mr. Debenham) thought the fault lay with the officialism which was inseparable from every department of State. He considered therefore that the more they could dispense with officialism in any form and trust to voluntary effort, the more would the interests of labour generally be advanced.

Mr. W. STORR asked himself whether the suggestions contained in the paper would not raise some collision of interests. It was admitted by all that in the present condition of affairs, a condition which must last for some time, no one could render greater service than by bringing the unemployed to the work there was for them

to do. But from the tone of the paper it might be supposed that the demand for workmen and the demand for labour were somewhat equally balanced, and that rapid communication would maintain a very desirable equilibrium, whereas the fact of course was that the number of workmen was far in excess of the demand. An employer was interested in attracting to his own centre more workmen than he needed, but the men were not equally interested in increasing the competition for any work which might be offered. Everyone wanted, as far as possible, to get rid of casual labour. But might not this scheme tend to increase it, and might it not tend to lower wages? An employer requiring say 100 men throughout the year would be tempted to diminish the number of his permanent hands to some 50, and to rely with confidence on getting the remainder of his work done by casual men who, promptly informed of the vacancies to be filled up, would flood the local labour market. He knew that there were signs of such temptation to be found even in domestic employment at the present day, for casual labour amongst women was becoming far more common than formerly. If through such a scheme employers were to rely on the possibility of using the telegraph to bring to their aid labour from a distance, then the second condition of the labour market would in this respect be worse than the first.

Mr. W. M. ACWORTH thought that though there was a great deal to be said in favour of the information being obtained, tabulated, and analysed by experts, yet after all these experts only gave what they thought somebody else thought, or even perhaps what they thought somebody else ought to think, and not what somebody else actually did think. He ventured to say that one of the great advantages of blue books was the way in which they photographed the minds, as it were, of all classes of the community. Only the other day he had had in his hands a paper by the eminent German economist, Professor Gustav Cohn, who stated that he would give a portmanteau full of reports of experts, such as he was familiar with in Prussia, for fifty pages of an English blue book, giving the original facts and, as he expressed it, teeming with actuality. The speaker supported Mr. Schloss in saying that the English statistics were often really ludicrous in their inadequacy. So far as concerned railways, with which subject he was more familiar than with labour, he could say that there was not a State Government in the United States nor an Australian colony which did not produce statistics that put our own to shame; and if the labour statistics of the Board of Trade were of the same class, even though Mr. Schloss's 7,000*l.* or 8,000*l.* (for which he seemed inclined to apologise) were to be increased tenfold, it would be money well spent, if so they were enabled to compare what was being done in this country, and what it cost to do it, with what was being done in other countries, with which we were at the present moment engaged in a life and death competition for the trade of the world.

Mr. D. F. SCHLOSS said that this was not a case in which the

reader of the paper need occupy much time in making a reply, because with a subject like the present, at this stage, it was rather his duty to suggest a basis for discussion than to defend his own proposals. He would, however, like to correct one misapprehension into which Mr. Howell had fallen in thinking that he (Mr. Schloss) had laid too much stress on the incapacity of the trade union secretaries to answer the printed questions of the Board of Trade. In the typical case he had mentioned, the secretary was one of the most assiduous and competent men he knew; and what he had said of him was not that he was unable to fill in the answers to inquiry forms, but that he consistently declined to devote his time to this purpose, on the ground that his time belonged to his society, and that he could not give it up to the Labour Department; but he declared his willingness to give information to anyone whom the department might send to see him. It was for that reason that he (Mr. Schloss) had laid stress on the necessity for sending down investigators to make verbal inquiries and to look into things for themselves. He might say that those who had worked with Mr. Booth never relied for an hour on circulars, which would not have been of the slightest use. Though many parts of the paper might be imperfectly thought out, yet if he had drawn the attention of the public to the extreme desirability of abandoning exclusive reliance on answers to circulars which were not answered, and to the necessity for special investigation, made personally by agents on the spot, the paper would not altogether have failed in doing some good.

A cordial vote of thanks to Mr. Schloss brought the proceedings to a close.

RESULTS of an INQUIRY as to the PHYSICAL and MENTAL CONDITION
of FIFTY THOUSAND CHILDREN seen in ONE HUNDRED and SIX
SCHOOLS. By FRANCIS WARNER, M.D. Lond., F.R.C.P.

[Read before the Royal Statistical Society, 21st February, 1893.
ROWLAND HAMILTON Esq., a Vice-President, in the Chair.]

THIS inquiry was promoted by a joint committee of the British Medical Association and the Charity Organization Society, for the purpose of collecting information, by scientific methods, as to conditions existing among children. 106 schools, containing 50,027 children—boys, 26,884; girls, 23,143—were examined by me, and a full report has been prepared. The history of these children, and evidence as to their home life, could not be obtained; school managers naturally object to questions being asked of the children concerning their health, and to their being handled for the purposes of physical examination. The observer must then depend mainly upon inspection, and having determined beforehand what to look for, he must record accurately what he sees. The terms used in giving descriptions each connote a fact or facts seen, and capable of verification and comparison. Viewing the child we see his body, and some indications of brain action; the signs noted are thus of two kinds: (1.) Points of form, proportion and size in the body and its parts—thus, as indications of the type of development, I noted the cranium, palate, ears, mouth, &c. (2.) Nerve-signs, which I have elsewhere described in detail;¹ these are seen in the balance of the head, spine, mobile features, and in the upper extremity, &c., and in movements of the parts of the face, the eyes, the fingers, &c. These movements and balances of action or postures are observed as signs of the action and condition of the nerve centres producing them. Inspection is easily conducted as the children stand in ranks, the trained observer can easily read off the physiognomy of the individual he looks at point by point, as well as the facial action, eye-movements, and the balances seen in parts of the body. Children presenting deviations from the normal in any point are asked to stand aside; and special cases or dull children not picked out by inspection are presented by the teacher; the selected cases are kept and the other children are dismissed to their class-room. Each of the selected cases is then reviewed individually and described on a schedule

¹ "Mental Faculty." Cambridge University Press.

form. On the schedule the first column is headed "Development, "physiognomy, &c.," and, as sub-headings, the words, "Cranium, "Palate, Ear, Growth," are printed; these are ticked if the parts of the child named are found normal on inspection, and abnormalities are described. Cases appearing in this column are subsequently dealt with as "development cases." The second column on the schedule is headed "Movements, Postures, &c., *i.e.*, nerve-signs," with sub-headings, General Balance, Expression, Eye-movements, Hand Balance, Head Balance; these are termed "Nerve-cases." In a third column particulars concerning physical health and nutrition are entered. The teachers give their report on the working power of each child noted in a fourth column. Such schedules were filled in for each of the 9,186 children noted as presenting some deviation from the normal. See Table I, Col. 2.

At the same time, the name, age, and standard in school of each child noted is entered on a name-sheet, with a reference number, which is repeated on the schedule, and thus the case is identified in subsequent analysis. The number of children seen in each standard (boys and girls), and the date of the inspection is noted.

So much for the work of inspection in the schools. For the purpose of analysis and classification each case is entered by me in a register; headings on the register give the "number of the "case," age, standard; columns are headed with the principal abnormal conditions, "Cranial abnormality," "Palate defect," "Expression defective," &c. The number of cases presenting each condition, and combined conditions, or conditions co-related, can be worked off the register.

Notes were thus taken of 9,186 cases² (boys, 5,579; girls, 3,607) or 20 per cent. of the boys, and 15 per cent. of the girls, and the report prepared is an analysis of these cases in comparison with the normal children in the schools. The cases may first be arranged in four primary groups, corresponding to the four columns in the schedule described—"Development Cases"—each child presenting one or more defects, 3,616 boys, 2,235 girls. See Table I, Col. 3.

"Nerve Cases"—each child presenting one or more abnormal nerve-signs—viz., 3,413 boys, 2,074 girls. See Table I, Col. 4.

"Nutrition Cases"—children pale, thin, or delicate—1,030 boys, 973 girls. See Table I, Col. 5.

"Dull Cases"—children reported by the teachers as dull or below the average in school lessons—2,216 boys, 1,463 girls. See Table I, Col. 6.

A child may be included in one, two, or in all of these primary groups, and thus they might be arranged in at least 250 sub-classes

² See Table I.

according to the combination of conditions present. This should be done to present a complete analysis; at present this labour has not been fully accomplished, but some of the sub-groups have been presented, and their distribution in groups of schools ascertained as an element towards determining the factors possibly tending to produce the special defective status observed. See Tables VIII and IX.

There is a general desire among us all to remove the conditions here called "low nutrition," and "mental dulness;" facts observed appear to demonstrate that the conditions among children are much associated with "defective development,"³ and "abnormal nerve-signs."⁴ Many of the "nerve-signs" recorded in the schedules I described several years ago, and urged their importance, specially for such inquiry as that before us, where we wish to record physical facts co-related to mental potentiality. Hitherto we have not had much information as to the frequency of defective conditions among the school population—this may now in part be supplied. It appears that "defect in development" may be a large factor in producing both "low nutrition" and abnormal or disordered nerve-conditions, indicated by "nerve-signs" and mental dulness; and that the brain conditions causing "nerve-signs" may be a large factor in producing dull children.

Now let me return to the four primary groups of children.

Development Cases.—This is the largest of the four groups, containing 13·4 per cent. boys and 9·6 per cent. girls upon the total numbers seen. The smaller proportion of defect in girls is noteworthy, and is maintained generally in tables giving analysis of sub-classes of this group. See Tables III and IV.

The importance of the group is indicated by the fact that of these children, 54·6 per cent. boys and 49·0 per cent. girls, also presented "nerve-signs," 20·2 per cent. boys and 32·0 per cent. girls were of low nutrition, 38·3 per cent. boys and 41·5 per cent. girls were reported as dull in school.

These co-relations for the individual defects are given in Table III. It is well known that imbeciles, and those mentally defective, commonly present defective physiognomy; and in asylums the mortality is heavy as compared with normal schools.

The relative frequency of each binary defect is given in Table IV, and in these cases with two (or more) defects the co-relation of defectiveness is generally higher than in the whole of the "development cases."

It appears then that the scientific researches of public medicine might well be devoted to the removal of causes of defective development which produce so much evil.

³ See Table III.

⁴ See Table IV.

*Nerve Cases.*⁵—This group contains 12·6 boys and 8·9 girls per cent. upon the total number seen, and here again the proportion is smaller among the girls. The individual signs have been analysed as to their relative frequency; some are more associated with brain defect, others with those weak or disordered conditions commonly called “nervousness.” Of these children 18·6 per cent. boys, and 28·8 per cent. girls also presented “low nutrition;” and 40·1 per cent. boys and 42·4 per cent. girls were reported as dull; while 57·8 per cent. boys, 52·8 per cent. girls presented defects in development.

If, in methods of training children, more care were taken to prevent and remove “abnormal nerve-signs” the brain condition of the children would probably be more receptive to mental training. The attention of school managers and educationalists might be directed to this object with advantage.

Low Nutrition.—Children thin, pale, and delicate. This group contains 3·8 per cent. boys and 4·2 girls upon the total number seen. The girls suffer most. Of these children 71·1 per cent. boys, 74·6 per cent. girls, were “development cases;” 61·6 per cent. boys, 61·4 per cent. girls, were “nerve cases;” 38·1 per cent. boys, 40·5 per cent. girls, were reported as “dull.” No inquiries were made as to the feeding of the children, but probably those in resident schools, and the 10,000 in upper class schools, were provided with sufficient food. In all groups of schools it appears to be the “development cases” that suffer the most from low nutrition. Could we remove the frequency of these defects we should probably have a smaller proportion of weak, thin, and delicate children.

Dull Cases.—This group contains 8·2 per cent. boys, 6·3 per cent. girls of the total number seen; of these children 63·0 per cent. boys, 63·4 per cent. girls were “development cases;” 61·8 per cent. boys, 60·1 per cent. girls were “nerve cases;” 18·1 per cent. boys, 27 per cent. girls were “nutrition cases.” Sub-groups are given later on.

The statements already given show that it is in the co-relation of conditions that we must seek for their relative importance, and, in part, for the means of determining their causation. A child classed in two or more of the primary groups of defects is more likely to be mentally dull than if only one form of visible defect is found. Referring to Table VII it is seen that the percentage of mental dullness rises from 35 for “development cases without “nerve-signs” to 39 for the primary group “development cases,” 43 for “development cases with nerve-signs,” reaching 44 for “development cases with low nutrition and nerve-signs.”

⁵ See Table VI.

The correlation of individual defects and nerve-signs is given in Tables III, IV, and VI, calculated upon all the cases presenting the condition among the 50,000 children. In considering the probable effect of a certain condition in a particular school, *e.g.*, "cranial abnormality" in a board school, it would be desirable to refer to a table of correlations founded upon the experience of public elementary schools only. In the fact of the varying correlation of "development cases" in resident and day schools we see the effects of the environment and training.

Having considered the signs observed in this inquiry, and their relative importance, I may pass on to describe groups of children, employing only terms which connote points seen, except in the matter of "mental dulness as reported by the teachers."

Children Mentally Feeble.—Boys, 124; girls, 110; total, 234. These children are classified as to the groups of schools in which they were seen, and as to the form or degree of mental defect. The "mentally exceptional" includes children who may not be usually dull at lessons, but are definitely defective in moral sense, or liable to attacks of mental disturbance, or to some condition approaching to epileptic mania. "The feebly gifted" form a class of children with low mental power, who are not sufficiently low class to be certified as imbeciles. The correlations of these cases were as follows:—

With defects in development	boys 84; girls 75; total 159
„ abnormal nerve-signs	„ 96; „ 77; „ 173
„ low nutrition.....	„ 26; „ 25; „ 51
And eye cases	„ 20; „ 16; „ 36
Crippled, maimed or deformed.....	„ 5; „ 3; „ 8
Epileptic or with history of fits	„ 5; „ 5; „ 10
With defects in development, nerve- signs and low nutrition	„ 17; „ 13; „ 30

It is difficult to define what physical conditions seen, as apart from mental tests, indicate the child unfitted for the average methods of training, and I think an arbitrary attempt to do so must fail. They may be sub-divided thus:—idiots, 2 boys; imbeciles, 30 boys, 16 girls; mentally exceptional, 3 boys, 9 girls; feebly gifted, 89 boys and 85 girls. Of the imbeciles 2 boys and 2 girls were epileptic.

Epileptics, and Children with History of Fits during School Life.—Boys, 36; girls, 18; total, 54. These cases were inquired for in every school, and in some instances children not attending school were sent for by the teachers. Any case with a history or indications of fits during school life was entered in this group for what

it may be worth; these cases have been published. The correlations of these cases are:—

With defects in development.....	boys 19; girls 9; total 28
„ abnormal nerve-signs	„ 22; „ 13; „ 35
„ low nutrition.....	„ 6; „ 5; „ 11
„ mental dulness	„ 23; „ 12; „ 35

Children Crippled, Paralysed, Maimed or Deformed. Boys, 155; girls, 84; total, 239. — These children varied greatly in brain power; some were mentally bright, others dull; they also varied in condition of health. The conditions of disease causing crippling were in various stages, and many of these children were capable of work and play. Five boys and 5 girls were mentally defective. The correlations of these children are:—

With defect in development	boys 44; girls 27; total 71
„ nerve-signs.....	„ 51; „ 22; „ 73
„ low nutrition.....	„ 44; „ 18; „ 62
„ mental dulness	„ 57; „ 36; „ 93
Cripples from congenital defect	„ 7; „ 9; „ 16
„ „ disease or injury.....	„ 88; „ 53; „ 141
„ „ paralysis	„ 60; „ 22; „ 82

Eye Cases. Boys, 836; girls, 637; total, 1,473. — No tests were used as to acuteness of vision, or errors of refraction, but when the eyes were looked at obvious defects were noted. Cases of ophthalmia were not registered, but some of its late effects were recorded under the headings, “disease of cornea,” and “eyes lost “by disease;” ophthalmia was seen in several day schools. Under the heading, “squint,” are registered, boys, 485; girls, 322; total, 807. Cases requiring operation as well as cases probably capable of correction by spectacles are here included. Children using spectacles in school were enumerated; with convex glasses, boys, 124; girls, 152; total, 276; with concave glasses, boys, 25; girls, 23; total, 48. The group of eye cases demonstrates what a large amount of ophthalmic work is needed among children, and the fact that with 807 cases of squint, only 276 used convex glasses, shows that spectacles must be required by many who do not use them. See Table I, Col. 7.

Children that appear to require special care and training.—Some difficulty has been experienced in framing anything like a definition of this class of children. I think that each of these children should be known to the managers, and that each case should be considered separately. It is not intended to imply that these children cannot be provided for in day schools, but they need to be provided for. Eye cases and the deaf are not included, not on account of their small number, but because these cases could not be specially

investigated in this inquiry, and attention has been fully drawn to their condition in other reports. In this group are included "children mentally feeble," "epileptics," "cripples," and the children who appeared in every one of the four primary groups of defects, *i.e.*, children of defective constitution, with defective or disordered brains and mental dulness. The group as thus arranged is given in Table V, and, allowing for overlapping cases, contains 817 children (boys, 473 ; girls, 344), or 1.6 per cent. on the 50,000 seen.

TABLE V.—*Cases that appear to require Special Care and Training on Grounds of Physical or Mental Condition.*

Conditions on Account of which Children are included.	Number of Cases among 50,000 Children.		
	Boys.	Girls.	Total.
Cases defective or exceptional in mental status	124	110	234
Epileptic or with history of fits	36	18	54
Crippled, paralysed, or maimed, &c.	155	84	239
Cases defective in development and of low nutri- tion ; with abnormal nerve-signs and reported dull	192	157	349
Some children appear in more than one of the classes given above ; the actual number of children was	507	369	876
	473	344	817

It has been shown that the constitution and present condition of school children varies much, and the records of the experience of the teachers with the individual children indicates a correlation between such physical facts and mental dulness. It is to the advantage of the public that the defective and the dull should be encouraged to regular school attendance ; might not this be better secured if in assessing educational results, allowance were made for the presence of the less favoured children ? Is it practicable to prepare an assessment of the child-material in a given school by means of inspection such as I have described, or some simple modification thereof ? For this purpose I have arranged the children in three groups,⁶ and determined for each group the average percentage of dull children. The numbers are given in Tables IX and XI, which may be compared with the numbers obtained by inspection of an individual school. There are two kinds of results of good training, absence of abnormal nerve-signs, and absence of mental dulness ; both results depend in part upon

⁶ 1. Development cases with nerve-signs.
2. Development cases without nerve-signs.
3. Nerve cases without development defect.

the child-material collected in the school. The normally made children should not present abnormal nerve-signs, and in those of defective development much may be done to remove them—this is the ideal perfection of training.

We may next review the 50,000 children as collected in groups of schools which have been arranged as to social class, nationality, and resident, and day schools. See Tables VIII and IX. The classes or groups of children previously described may be traced through each group of schools, and their relative proportions noted. 10,000 children in 20 day schools of upper social class are compared with 26,000 children in 52 poorer day schools. It is somewhat surprising to see that the percentages go against the upper class in all columns.

Poor Law and certified industrial schools may be compared as to the condition of the children with the homes and orphanages. See Tables VIII and IX. It is seen that a larger proportion of the children had to be noted in the certified industrial schools than in the Poor Law; the homes and orphanages presenting fewer defective cases. This character is maintained throughout the columns of the table, except as to the number of "children reported as dull "by the teachers," which is higher for orphanages than in the certified schools. In seeking an explanation these groups of schools should be analysed as to nationality.

The resident schools taken as one group containing—boys, 8,246; girls, 5,403; total, 13,649, are placed in contrast with the day schools taken collectively, which contain—boys, 18,638; girls, 17,740; total, 36,378. A larger proportion of children had to be noted in the resident schools, and also for each defect, except "low nutrition," "development cases, with low nutrition and "nerve-signs," and "small heads."

It seems that the least favoured children gravitate to schools supported by the public.

Comparing the children in schools for English, Irish and Jews, some important particulars become apparent. The percentages indicating the proportion of cases with defects rises greatly on contrasting the Irish with the English children,⁷ so that 30 per cent. of all the children had to be noted, as against 17 per cent. of English, and this is maintained for each defective condition, except "small head," in which the percentage rises against the English children. I am not prepared to deal with the significance of these facts, and it must be remembered that they are drawn from schools mostly near London, and only one of these was a day school.

The Jewish children, 2,961 (boys, 1,389; girls, 1,572), were those seen in the free schools, Whitechapel. Here the percentage

⁷ See Tables VIII, IX, XII.

that had to be noted fell to 15·7, and “development cases” fell from 10·8 per cent. for the English to 7·5 for the Jews; and the only percentage against the Jewish children is for “growth, small.” Among the Jewish boys there was a rise of 1 per cent. for “nerve-cases” as compared with English boys, but these cases were slightly lower among the girls. The numbers reported dull were 3 per cent. lower than with English; for Jew boys, the percentages being equal for English and Jewish girls. Cases of “low nutrition” were half as common as among the English, falling to 2·7 per cent.

In the consideration of general, social, and educational problems, it is convenient to present the children in groups described in terms connoting combined physical conditions; and, again, when seeking information as to causation of defective conditions, the process of analysis must be used.

“Cranial abnormality” is said to be the most important defect in development, because it is the most frequent and has the highest correlation. Cranial abnormalities—boys, 1,528; girls, 1,048; total, 2,576. See Table III.

Analysis of these cases of cranial abnormalities show:—

Small heads	boys 327; girls 738; total 1065
Large heads	257; „ 46; „ 303
Bosses on cranium	495; „ 127; „ 622

Other minor groups are given. Now, large heads and “bosses on the cranium” are known to be largely due to rickets, which is a preventable condition. Were all possible means adopted for the prevention of the rachitic condition we should probably have fewer children with cranial abnormalities and defects correlated thereto. “Small heads,” as forming the largest sub-group, appears worthy of full consideration. They were correlated—

With nerve-signs	boys 177; girls 372; total 549
„ low nutrition	„ 152; „ 399; „ 550
„ mental dulness	„ 165; „ 353; „ 518

“Small heads” form a prominent condition as affecting girls more than boys; the percentage varies among the nationalities.

Among the English	boys 1·3 per cent.; girls 3·4 per cent.; total 2·3 per cent.
„ Irish	„ 0·7 „ „ 2·3 „ „ 1·1 „
„ Jew	„ 1·0 „ „ 2·2 „ „ 1·6 „

Among the social classes, contrary to the rule, they are more frequent among the poorer children; the largest proportion appears among the girls in the certified industrial schools, thus:—

Poor Law schools	boys 0·7 per cent.; girls 1·6 per cent.; total 1·1 per cent.
Certified industrial	„ 1·5 „ „ 6·2 „ „ 3·5 „
Homes and orphanages	„ 1·8 „ „ 5·0 „ „ 3·6 „

The average percentage upon the 50,000 children is—boys, 1·2; girls, 3·2; total 2·1. A table in the full report gives distribution of these cases in districts; the following are quotations:—

	Number of Children seen.		Percentage of Small Heads.	
	Boys.	Girls.	Boys.	Girls.
Bermondsey	1,135	773	0·1	2·8
Strand	484	452	1·4	7·0
City of London	321	590	1·2	6·1
Bethnal Green	718	632	1·1	0·4
Weybridge district	1,079	906	0·8	3·5

A considerable amount of labour has been expended in showing the distribution of defects in development in 20 districts in and about London; the distribution is very unequal, but as it is evident that at present the comparatively small number of schools seen does not justify any conclusions being drawn on this matter, which is of great importance, I will refer to the published tables without entering further upon the subject.

Some points concerning low nutrition, development defect, and institution life, may now engage attention.

As to the “Cases of Low Nutrition” these facts have been demonstrated:—

(1.) Contrary to the rule for defects there are more cases of low nutrition among girls than boys.

(2.) The correlation of low nutrition with development defect is higher for girls than for boys.

(3.) Low nutrition is less frequent in resident than in day schools.

When we take the percentages of cases of “low nutrition “without development defect” upon the total number of children seen, it appears that the numbers are a trifle higher with boys than girls. The following figures and percentages are given for all the schools:—

	Boys.	Girls.	Total.
“Low nutrition with development defect”	733	726	1,459
“Low nutrition without development defect”	297	247	544
Total number of cases of “low nutrition”	1,030	973	2,003
<i>Percentages upon the total numbers of children seen.</i>			
“Low nutrition with development defect”	2·7	3·1	2·9
“Low nutrition without development defect”	1·1	1·0	1·0
“Cases of low nutrition”	3·8	4·2	4·0

Development defect appears as the great cause of low nutrition, predisposing the children to abnormal nerve-signs and mental dulness. The facts are shown in Table III. Are these children benefited by residence in a boarding institution? They may be fattened, especially the girls, by the regular living, good feeding, and absence of causes of mental excitement, but at the cost of becoming slightly more dull mentally—especially the girls; while nerve-signs are increased—especially among the boys.

Following the experience gained, the following estimate may be given, showing the probable results of placing them first in a day school and then in a resident school :—

TABLE X.—*Condition of “Development Cases” in Day and in Resident Schools.*

IN THE DAY SCHOOL.			
<i>Boys' Side.</i>		<i>Girls' Side.</i>	
100 boys with defects in development.		100 girls with defects in development.	
Nerve cases	50	Nerve cases	47
Nutrition low	23	Nutrition low	38
Reported dull	38	Reported dull	40
<hr/>		<hr/>	
Cases of nutrition low, nerve- signs, or dull.....	} 111	Cases of nutrition low, nerve- signs, or dull.....	} 125
<hr/>		<hr/>	

IN THE RESIDENT SCHOOL.			
<i>Boys' Side.</i>		<i>Girls' Side.</i>	
100 boys with defects in development.		100 girls with defects in development.	
Nerve cases	62	Nerve cases	52
Nutrition low	16	Nutrition low	20
Reported dull	40	Reported dull	44
<hr/>		<hr/>	
Cases of nutrition low, nerve- signs, or dull.....	} 118	Cases of nutrition low, nerve- signs, or dull	} 116
<hr/>		<hr/>	

It is thus obvious that residence contrasted with home life and day school produces marked effects, different among boys and girls. On both sides of the resident school nutrition becomes higher, more markedly with the girls. Nerve-signs increase with residence, especially with boys. Mental dulness increases with residence slightly, more so among the girls.

The loss and gain from putting 100 boys and 100 girls with defects in development in resident schools may be represented thus :—

	Boys.	Girls.
Fewer cases of low nutrition	7	18
More cases of abnormal nerve-signs	12	5
More cases of mental dulness	2	4

This estimate is compiled from percentages on the 50,000 children; it might be calculated from tables presenting English children only. (See Table XII.)

In arranging this method of school inspection and preparing reports, I have endeavoured throughout to find means of presenting the children in groups whose needs may be considered, and at the same time not to lose sight of the needs of individual children. This may be illustrated in the following report on a school :—

“It is located in one of the lowest parts of London, probably scarcely one child is above the very poor. The streets in the immediate neighbourhood are narrow, and the families mostly live in block dwellings.”

TABLE XI.—*Report on Schools.*

	Numbers Found.		Average Percentage among the 50,000.	
	Boys.	Girls.	Boys.	Girls.
Numbers seen	165	239	—	—
„ noted	39	57	20·7	15·5
Development cases	17	22	13·4	9·6
Nerve cases	22	37	12·6	8·9
Cases of low nutrition	5	17	3·8	4·2
Reported as dull	22	25	8·2	6·3
Eye cases	5	9	3·1	2·3
Development cases with nerve-signs	7	10	7·3	4·7
„ „ without nerve-signs	10	12	6·1	4·9
Nerve cases without development defects	15	17	5·3	4·2
Development cases with nerve-signs } and low nutrition	—	—	1·5	1·6
Small children	3	6	0·8	0·9
Children with small heads	3	8	1·2	3·2
Exceptional children	3	2	—	—

From a general statement of the condition of the school, we may pass on to details of some individual children which concerns the managers; the names could be given.

Eye Cases.—3 boys and 6 girls squinted; none used glasses.

Of the “Exceptional Cases,” brief notes are as follow :—

(1,610.) Boy, age 8, Standard I; “body well made. Is over-“mobile with twitching fingers, mouth open, grins, speech in-“distinct, but response in action good and quick. Teachers’“report, cannot read or do the simplest calculation, practically“does no work.”

(1,613.) Boy, age 8, Standard I; “body well made; orbicu-“laris oculi relaxed, indicating exhaustion; speech very defective,“but response in movement good. He does not know money and“cannot calculate anything; has no idea of any work.”

(1,614.) Boy, age 11, Standard II; "very short and small, head small; right eyelid droops (congenital ptosis). He is thin, "and weak physically, mentally and morally."

(1,644.) Girl, age 13, Standard I; well made, but wanting in expression and squints, and is pale. She is ricketty and walks with irons, but has just broken collar-bone. Reported dull.

(1,653.) Girl, age 14, Standard II; "fairly well built, expression wanting; can speak fairly and tell value of money. "It is not that the brain is defective, but the school report is: " "Cannot read, has been in school five years and can do nothing; "not spiteful or troublesome."

Reports on *small-headed children* are as follow:—

(1,593.) Boy, age 8, Standard, Infant; short and small for age; head no bigger than a baby's; pale, thin, and very dull.

(1,603.) Boy, age 8, Standard I; head small, eyes not well moved; response in action slow and inaccurate; very dull.

Case 1,614 has been already given.

(1,633.) Girl, age 6, Standard, Infant; head very small; pale, thin, very dull. (1,636.) Girl, age 7, Standard, Infant; head very small, expression wanting, dull. (1,641.) Girl, age 10, Standard I; head small, expression wanting, lordosis; "a truant, backward, "can copy well." (1,642.) Girl, age 8, Standard I; short and small, head small, expression bright, average ability. (1,648.) Girl, age 8, Standard I; head very small and conical, mouth open, nervous hand with finger twitches, dull. (1,657.) Girl, age 8, Standard II; head small, hand balance weak, thin, bright at lessons. (1,658.) Girl, age 8, Standard II; small thin child with small head, bright. (1,665.) Girl, age 8, Standard III; a small thin child with small head, reported dull.

In placing before you some results of this inquiry concerning the child population, my chief purpose has been to show that it is possible to conduct such investigations upon scientific principles, and that useful results may be obtained. Many problems have been suggested, and evidence, as at present collected, has been brought to bear upon them; it is, however, obvious that a much larger amount of evidence must be prepared before a final opinion can be formed upon the propositions dealt with. A committee appointed by the International Congress of Hygiene and Demography is prosecuting this work, and I hope to report on 100,000 more children, and submit the results of tabulation to actuarial investigation.

TABLE II.—*General Statistical Summary. Further Analysis of Cases Seen.*

		8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
		Analysis of Conditions of Defect in Development.						Analysis of Defective Nerve-Signs.										
		Cranial Abnormality.	Palate Defective.	External Ears Defective.	Epicanthis.	Other Defect in Development.	General Balance Bad.	Expression Defective.	Frontals Overacting.	Corrugation.	Orbicularis Oculi Reversed.	Eye Movements Defective.	Head Balance Weak.	Hand Balance Nervous.	Hand Balance Weak.	Finger Twitches.	Lordosis.	Other Nerve-Signs.
		B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.
I—XIX.	Poor law schools	387	316	357	124	254	74	259	423	38	121	120	66	93	189	80	36	144
	Totals...	171	143	81	101	160	32	146	107	4	66	75	47	55	66	25	45	71
	(Total)	558	359	838	235	414	106	405	530	42	187	195	113	148	255	105	81	215
XX—XXVIII.	Certified industrial schools	160	67	106	28	122	12	56	175	28	30	87	13	35	49	25	14	34
	Totals...	40	18	3	3	21	6	21	14	5	5	11	8	5	14	3	4	13
	(Total)	200	85	109	31	143	18	77	189	23	35	98	21	40	63	28	18	47
XXIX—XXXIV.	Homes and orphanages	34	32	41	14	27	—	17	43	4	12	37	1	2	47	2	2	8
	Totals...	79	30	9	18	38	1	31	28	6	10	32	2	9	41	8	6	13
	(Total)	113	62	50	32	65	1	48	71	10	22	69	3	11	88	10	8	21
I—XXXIV.	Total of institutions at which children are boarded	581	315	404	166	403	86	332	641	70	163	244	80	130	285	107	52	186
	Totals...	290	191	93	122	219	39	198	149	15	81	118	57	69	121	36	55	97
	(Total)	871	506	497	288	622	125	530	790	85	244	362	137	199	406	143	107	283
XXXV—C.	Public elementary	910	448	621	338	483	110	344	659	123	351	547	136	404	427	319	124	337
	Totals...	734	332	158	248	400	123	254	132	23	243	329	245	415	358	214	202	131
	(Total)	1,644	780	779	586	883	233	598	791	146	594	876	381	819	785	533	326	368
CI—CVI.	Other schools	37	33	22	10	22	5	18	22	6	8	7	3	16	3	19	8	11
	Totals...	24	12	17	14	26	11	22	13	2	19	38	17	32	25	11	22	6
	(Total)	61	45	39	24	48	16	40	35	—	8	45	20	48	30	30	30	17
I—CVI.	Grand total of all the 106 schools	1,528	796	1,047	514	908	201	694	1,322	199	522	798	319	550	715	445	184	434
	Totals...	1,048	535	268	384	645	173	474	294	40	313	485	319	516	504	261	279	234
	(Total)	2,576	1,331	1,315	898	1,553	374	1,168	1,616	239	865	1,383	638	1,060	1,219	706	463	668

TABLE III.—*Showing Number of Children with each Defect in Development, also giving their co-relations. Percentages are taken on Number of Cases presenting the Defect.*

Defects in Development. Total Number presenting each Condition respectively.	With Abnormal Nerve-Signs.				With Low Nutrition.				Reported Dull by Teachers.									
	Number of Cases.		Per Cent. of Cases.		Number of Cases.		Per Cent. of Cases.		Number of Cases.		Per Cent. of Cases.							
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.						
	Total.	Total.	Total.	Total.	Total.	Total.	Total.	Total.	Total.	Total.	Total.	Total.						
Total of cases presenting defects in development	1,975	1,096	3,071	54.6	49.0	52.4	733	726	1,459	20.2	32.0	24.9	1,398	928	2,326	38.3	41.5	39.7
B. 3,616. G. 2,235. T. 5,851.																		
Cranial abnormalities	850	531	1,381	55.6	50.6	53.6	392	480	872	25.7	45.8	33.8	634	477	1,111	41.4	45.5	43.1
B. 1,528. G. 1,048. T. 2,576.																		
Defects of palate	441	262	703	55.4	48.9	52.8	173	155	328	21.7	28.9	24.6	324	232	556	40.7	43.3	41.7
B. 796. G. 525. T. 1,321.																		
Defects of external ear	566	128	694	54.0	47.7	52.7	196	72	268	18.7	26.8	20.3	340	103	443	32.4	38.4	33.6
B. 1,047. G. 268. T. 1,315.																		
Epicanthus	227	160	387	44.1	41.6	43.0	65	73	138	12.6	19.0	15.3	192	136	328	37.3	35.1	36.5
B. 514. G. 384. T. 898.																		
Head small	177	372	549	54.1	50.4	51.5	151	399	550	46.1	64.0	51.6	165	353	518	50.4	47.8	48.6
B. 327. G. 738. T. 1,065.																		
Head asymmetrical	40	7	47	47.6	43.7	47.0	18	3	21	21.4	18.7	21.0	35	6	41	41.6	37.5	41.0
B. 84. G. 16. T. 100.																		
Other defects in development...	555	355	910	61.1	54.7	58.5	189	172	361	20.8	26.5	23.2	383	263	646	42.0	40.5	41.5
B. 908. G. 645. T. 1,553.																		
Children small for their age ...	119	110	229	56.9	52.6	54.7	88	101	189	42.1	48.3	45.2	78	79	157	37.3	37.3	37.3
B. 209. G. 209. T. 418.																		
Bridge of nose thick or sunken..	131	95	226	54.3	44.3	49.6	16	19	35	6.6	8.8	7.6	87	77	164	36.1	36.0	36.1
B. 241. G. 214. T. 455.																		
Features large or coarse	112	68	180	76.1	65.3	71.7	19	17	36	12.9	16.3	14.3	73	43	116	49.6	41.3	46.2
B. 147. G. 104. T. 251																		
Palpebral fissures small	61	57	118	62.2	68.6	65.1	22	16	38	22.4	19.2	21.0	41	39	80	41.8	47.0	44.2
B. 98. G. 83. T. 181.																		
Mouth small.....	16	10	26	59.2	58.8	59.0	8	2	10	29.6	11.7	22.7	8	10	18	29.6	58.8	40.9
B. 27. G. 17. T. 44.																		

Note.—The group “other defect in development” is analysed in the last five lines, as far as co-relation has been ascertained.

TABLE VI.—*Showing Number of Children among the Fifty Thousand presenting each Abnormal Nerve-Sign, also giving their co-relations.*

Total number presenting each condition respectively.	Number of cases with co-related defect as stated.						Percentage of the defect upon number in First Column.					
	Defects in Development.			Low Nutrition.			Mental Dulness.			Defects in Development.		
	Boys.			Girls.			Boys.			Girls.		
	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.	Total.	Boys.	Girls.
Total of cases presenting abnormal nerve signs B. 8,413. G. 2,074. T. 5,487.	54	49	52	635	598	1,233	1,370	880	2,250	57.8	52.8	55.9
General balance defective B. 201. G. 173. T. 374.	138	86	224	47	56	103	99	72	171	68.6	50.0	59.8
Expression defective B. 694. G. 474. T. 1,168.	493	329	822	191	146	337	369	253	622	71.0	69.4	70.3
Frontals overacting B. 1,322. G. 294. T. 1,616.	583	145	728	221	64	285	548	136	684	44.1	49.6	45.0
Corrugation B. 199. G. 40. T. 239.	105	22	127	45	6	51	91	21	112	52.7	55.0	53.1
Oculiculus oculi relaxed B. 522. G. 343. T. 865.	361	224	585	112	112	224	208	158	366	69.1	65.3	67.6
Eye movements defective B. 798. G. 485. T. 1,283.	500	298	798	130	150	280	329	222	551	62.6	61.4	62.1
Head balance weak B. 219. G. 319. T. 538.	151	178	329	46	109	155	97	145	242	68.9	55.8	61.1
Hand balance weak B. 715. G. 504. T. 1,219.	375	196	571	115	107	222	286	178	464	52.4	38.8	46.8
Hand balance nervous B. 550. G. 516. T. 1,066.	253	205	458	111	158	269	189	170	359	46.0	39.7	42.9
Finger twitches B. 445. G. 261. T. 706.	202	99	301	90	95	185	143	78	221	45.3	37.9	42.6
Lordosis B. 184. G. 279. T. 463.	92	107	199	36	87	123	72	85	157	50.0	38.3	42.9
Other nerve signs B. 434. G. 234. T. 668.	278	135	413	104	58	162	228	125	353	64.0	57.6	61.8
Stammering and speech defect B. 116. G. 70. T. 186.	30	44	74	10	13	23	27	43	70	25.5	62.8	40.8
Response in action slow and defective B. 112. G. 56. T. 168.	69	38	107	29	17	46	75	39	114	61.6	67.8	63.6
Mouth open B. 134. G. 59. T. 193.	107	38	145	41	20	61	68	31	99	79.8	64.4	75.1
Oversmiling and grinning B. 69. G. 43. T. 112.	52	27	79	13	11	24	39	26	65	75.3	62.8	70.5
Nystagmus B. 25. G. 9. T. 34.	7	6	13	6	3	9	10	4	14	28.0	66.6	38.2

TABLE VII.—*Mental Dulness as reported by the Teachers in co-relation with Physical Defects, showing Number of Children presenting such Defect, the Number of the reported Dull, and the Percentage of Dull Children taken upon the Number presenting the Condition, for 50,000 Children.*

Number of Children presenting each Condition or Combination respectively.	Reported by the Teachers as Mentally Dull.			Percentage of Dull Children taken on Numbers presenting the Condition.		
	Boys.	Girls.	Total.	Boys.	Girls.	Total.
Cases presenting defect in development..... } B. 3,616. G. 2,235. T. 5,831.	1,398	928	2,326	38·6	41·5	39·7
Cases presenting abnormal nerve-signs } B. 3,413. G. 2,074. T. 5,487.	1,370	880	2,250	40·1	42·4	41·0
Development cases with abnormal nerve-signs } B. 1,975. G. 1,096. T. 3,071.	855	475	1,330	43·2	43·3	43·3
Nerve cases without development defect } B. 1,438. G. 979. T. 2,416.	535	405	940	37·2	41·4	38·9
Development cases without nerve-signs } B. 1,641. G. 1,139. T. 2,780.	541	441	982	32·9	38·7	35·3
Cases presenting low nutrition B. 1,030. G. 973. T. 2,003.	402	395	797	39·0	40·5	39·7
Development cases with low nutrition } B. 733. G. 726. T. 1,459.	291	290	581	39·7	39·9	39·8
Development cases with low nutrition and abnormal nerve-signs } B. 412. G. 381. T. 793.	192	157	349	46·6	41·2	44·0
Cases without development, defect, and abnormal nerve-signs } B. 525. G. 394. T. 919.	185	134	319	35·2	34·0	34·7
Response in action defective B. 112. G. 56. T. 168.	75	39	114	67·0	69·0	67·8
Cases with development defects or with nerve-signs } B. 5,054. G. 3,213. T. 8,267.	1,933	1,333	3,266	38·2	41·4	39·1
Cases noted for some defective condition } B. 5,579. G. 3,607. T. 9,186.	2,216	1,463	3,679	39·7	40·5	40·0
Among the 50,027 children B. 26,884. G. 23,143. T. 50,027.	2,216	1,463	3,679	8·2	6·3	7·0

TABLE XII.—*Showing Analysis of the Distribution of Children seen according to Nationality and Groups of Schools, giving for Boys and Girls the Percentage of Conditions stated, taken upon the Number seen.*

50,027 Children, arranged in Nationalities as to groups of Schools.	Percentage of Numbers noted.		Percentage of Development Cases.		Percentage of Nerve Cases.		Percentage of Cases of Low Nutrition.		Percentage Reported Du- by Teachers.	
	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.	Boys.	Girls.
English children—										
Day Schools	19·2	15·0	12·6	9·0	11·0	8·5	4·0	4·8	7·8	5·8
Poor Law	21·8	17·3	14·5	12·0	14·2	9·8	4·1	2·4	8·1	7·0
Certified Industrial	21·1	20·4	14·3	14·2	12·6	13·8	1·1	5·3	10·2	9·2
Homes and Orphanages	22·2	17·7	13·8	12·8	14·0	10·7	1·8	3·3	8·8	10·8
Total for English children....	20·0	15·6	13·1	9·8	11·8	8·9	3·8	4·3	8·0	6·3
Irish children—										
Day Schools	24·0	16·4	14·8	10·9	20·5	11·6	7·6	6·5	7·9	6·5
Poor Law	27·8	19·1	18·6	13·1	20·8	11·0	3·6	2·0	12·2	10·0
Certified Industrial	49·7	28·2	32·0	18·4	35·4	14·6	5·2	11·6	20·8	18·4
Total for Irish children	34·5	19·3	22·4	12·9	25·7	11·9	4·9	5·9	14·3	9·7
Jewish children—										
Day School	17·8	13·9	8·4	6·9	11·2	8·4	3·0	2·4	4·6	5·6
Grand total	20·8	15·6	13·4	9·7	12·7	9·0	3·8	4·2	8·2	6·3

Table XIII. This table represents the distribution of cases of "some defects in development." (See column No. 3 in the centre of the table.) Next it shows the ratio of each defect upon the number seen in each area. (See columns 8 to 12 on the left hand.) It shows also the ratios of each defect upon the cases of mal-development. (See columns 8 to 12 on the right hand.)

It must be observed :

(1) That the data contained in the above tables are necessarily limited. The children examined in the several areas were comparatively but a small proportion of the child-population of each district.

(2) That in order to draw final conclusions as to the causation of defects and their distribution in various localities, a much larger number of children must be seen.

TABLE XIII.—*Public Elementary Day Schools. Conditions of Defective Development. Percentages in Cases seen in Twenty Districts.*

Table showing Percentage of Development Conditions respectively upon Number of Children seen.													Percentage of Development Cases on Total seen.		Table showing Percentage of Development Conditions respectively upon the Development Cases.															
	Number of Children seen.	8					9					10					11					12								
		Cranial Ab-normality.	Palate Defective.	External Ears Defective.	Epicanthis.	Other Defect in Development.	Cranial Ab-normality.	Palate Defective.	External Ears Defective.	Epicanthis.	Other Defect in Development.	Cranial Ab-normality.	Palate Defective.	External Ears Defective.	Epicanthis.	Other Defect in Development.	Cranial Ab-normality.	Palate Defective.	External Ears Defective.	Epicanthis.	Other Defect in Development.									
A Kensington, Chelsea, Pimlico	1,385	6.4	3.6	5.0	2.0	2.4	15.0	9.6	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0
	1,127	4.1	2.9	1.2	2.8	1.8	9.6	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	2,512	5.4	3.3	3.3	2.3	2.2	11.6	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	1,214	5.9	2.9	3.1	1.1	2.0	11.6	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
B Marylebone	1,221	4.1	2.9	0.9	1.3	3.2	9.5	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	2,435	5.0	2.9	2.0	1.2	2.6	10.5	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	779	4.2	4.6	5.5	3.8	3.8	15.7	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	624	4.4	3.2	1.4	2.7	2.8	11.2	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
C St. Pancras	1,403	4.3	3.9	3.6	3.3	3.4	13.6	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	484	4.7	1.6	3.3	0.6	0.8	9.7	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	452	6.6	1.7	0.6	1.3	2.2	11.5	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	936	5.8	1.7	2.0	0.9	1.4	10.5	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
D Strand	1,177	5.3	1.5	2.1	1.1	2.8	10.7	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	1,103	4.2	1.0	0.9	1.0	1.9	8.0	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	2,280	4.8	1.2	1.5	1.0	2.3	9.3	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	876	3.0	1.6	1.3	2.0	2.0	8.2	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
E Clerkenwell	802	3.8	0.7	0.6	0.9	2.6	6.6	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	1,678	3.3	1.1	1.0	1.4	2.3	7.4	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	321	5.2	2.8	3.1	2.0	1.8	11.5	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	802	3.8	0.7	0.6	0.9	2.6	6.6	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
F Islington	1,678	3.3	1.1	1.0	1.4	2.3	7.4	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	321	5.2	2.8	3.1	2.0	1.8	11.5	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	802	3.8	0.7	0.6	0.9	2.6	6.6	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	1,678	3.3	1.1	1.0	1.4	2.3	7.4	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
G City of London	590	7.4	2.7	0.5	0.8	3.3	12.0	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	911	6.6	2.7	1.4	1.2	2.8	11.8	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	2,430	4.2	1.9	3.0	1.1	2.4	10.2	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	2,521	3.8	1.7	1.1	1.1	1.8	7.9	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
H Whitechapel.....	4,951	4.0	1.7	2.0	1.1	2.1	9.0	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	
	4,951	4.0	1.7	2.0	1.1	2.1	9.0	12.6	11.6	9.5	10.5	15.7	11.2	13.6	9.7	11.5	10.5	10.7	8.0	9.3	8.2	6.6	7.4	11.5	12.0	11.8	10.2	7.9	9.0	

TABLE XIII.—*Public Elementary Day Schools. Conditions of Defective Development. Percentages in Cases seen—Contd.*

	Table showing Percentage of Development Conditions respectively upon Number of Children seen.							Table showing Percentage of Development Conditions respectively upon the Development Cases.				
	8	9	10	11	12	3	Percentage of Development Cases on Total seen.	8	9	10	11	12
	Number of Children seen.	Cranial Ab-normality.	Palate Defective.	External Ears Defective.	Epicanthis.	Other Defect in Development.	Development Cases on Total seen.	Cranial Ab-normality.	Palate Defective.	External Ears Defective.	Epicanthis.	Other Defect in Development.
I Stepney	846	5.5	3.1	3.6	2.3	1.3	13.8	40.0	13.0	26.5	17.0	9.4
J St. George's-in-the-East....	807 1,663 665	4.2 4.8 7.8	3.7 3.4 1.9	1.2 2.4 5.8	1.7 2.0 3.0	2.2 1.7 4.0	11.8 12.8 16.8	35.4 38.0 46.4	31.2 26.7 11.6	10.4 18.7 34.8	14.5 15.9 16.9	18.7 13.6 24.1
K Bethnal Green	576 1,241 718	4.8 6.4 5.1	2.7 2.3 3.0	1.5 3.8 4.4	1.9 2.4 2.6	5.2 4.5 3.0	10.9 14.1 15.0	44.4 45.7 34.2	25.4 16.5 20.4	14.2 27.4 29.6	17.4 17.1 17.5	47.6 32.5 20.4
L Hackney	632 1,350 380	1.2 3.3 4.5	3.1 3.0 5.5	1.1 2.8 3.9	1.2 2.0 0.6	2.0 2.5 1.8	6.4 10.9 11.2	20.0 30.4 40.5	50.0 28.3 48.5	17.5 26.3 35.1	20.0 18.2 5.4	32.5 23.6 16.2
M Battersea	206 536 982	9.0 6.1 6.0	2.5 4.3 2.6	1.4 3.0 1.8	1.0 0.7 3.1	2.5 2.0 3.8	12.1 11.5 14.0	72.0 53.2 43.5	20.0 37.1 18.8	12.0 25.8 12.3	8.0 6.4 22.4	20.0 17.7 27.5
N Camberwell, Walworth, and Stockwell	957 1,939 754	5.7 5.9 6.6	1.0 1.8 2.5	0.4 1.1 3.8	1.1 2.1 1.7	3.2 3.5 2.9	8.7 11.4 12.4	65.4 51.8 53.2	11.9 16.2 20.2	4.7 9.9 30.8	13.0 18.9 13.8	36.9 31.0 23.4
O Bermondsey and	1,090 1,844 1,135	3.0 4.4 6.2	2.0 2.7 2.2	1.1 2.2 3.7	1.6 1.1 1.4	2.3 2.6 4.4	7.8 9.7 13.5	37.2 45.5 46.1	24.4 22.2 16.2	13.9 22.7 27.9	20.9 11.6 11.0	30.2 26.6 33.3
P St. Saviour's Deptford,	773 1,908 1,347	3.6 5.1 3.7	1.2 1.8 2.0	0.5 2.4 2.6	1.6 1.0 1.4	1.2 3.1 2.4	7.0 10.9 9.6	51.8 47.5 39.2	18.5 16.8 20.7	7.4 22.6 26.9	24.0 14.4 14.6	18.5 29.3 24.6
Greenwich, and Woolwich	1,221 2,568	5.3 4.5	1.9 2.0	0.9 1.8	1.3 1.4	2.5 2.7	9.3 9.5	57.0 47.5	19.3 20.0	10.5 19.2	14.9 14.7	27.2 25.8

TABLE XIII.—*Public Elementary Day Schools. Conditions of Defective Development. Percentages in Cases seen.—Contd.*

Table showing Percentage of Development Conditions respectively upon Number of Children seen.											
	8	9	10	11	12	3	8	9	10	11	12
	Percentage of Development Cases on Total seen.						Table showing Percentage of Development Conditions respectively upon the Development Cases.				
	Number of Children seen.	Cranial Abnormality.	Palate Defective.	External Ears Defective.	Epicanthis.	Other Defect in Development.	Cranial Abnormality.	Palate Defective.	External Ears Defective.	Epicanthis.	Other Defect in Development.
	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.	B. G. T.
Q Lewisham	450	3.1	1.7	3.1	2.0	10.0	31.1	17.7	31.1	20.0	22.2
	403	6.0	0.5	0.5	1.5	9.2	67.5	5.4	5.4	16.2	10.8
	853	4.5	1.1	1.8	1.7	9.6	47.5	12.1	19.5	18.2	17.0
R Guildford	364	4.9	2.4	0.9	0.8	10.4	47.3	23.6	18.4	7.9	21.0
	311	5.4	0.3	1.0	0.6	7.7	70.8	4.1	12.5	8.3	33.3
	675	5.2	1.4	1.4	0.7	9.1	56.4	16.1	16.1	8.0	25.0
S Croydon	801	5.0	2.2	5.0	2.1	13.6	36.7	16.5	36.7	15.6	15.5
	632	2.5	1.2	0.8	1.4	6.9	36.3	18.1	11.3	20.4	31.8
	1,433	3.9	1.1	3.2	1.8	10.6	36.6	17.0	31.0	17.0	20.2
T Weybridge District	1,079	2.7	2.0	3.2	2.5	11.6	23.7	17.4	27.7	22.2	22.2
	906	3.7	1.5	0.5	2.0	8.2	45.3	18.6	6.6	24.0	20.0
	1,985	3.2	2.0	2.0	2.3	10.1	32.0	18.0	20.0	23.0	21.7
Total number of cases seen	18,137	5.0	2.4	3.4	1.8	12.2	41.1	20.2	28.0	15.2	21.8
	16,954	4.3	1.9	0.9	1.4	8.8	49.1	22.2	10.6	16.6	26.8
	35,091	4.6	2.2	2.2	1.6	10.5	44.3	10.5	10.5	15.8	23.8

DISCUSSION *on* DR. WARNER'S PAPER.

BEFORE the paper was read, the Chairman (MR. ROWLAND HAMILTON) in introducing Dr. Warner, said that the paper represented the first result of about four years' work, and upon this was based a far larger investigation which was still in progress. He wished to assure his educational friends that this investigation was not to be associated with the indiscriminating cry of "over pressure" in schools raised some years ago. It was carried out in a scientific spirit, and though its results would be of much interest to all concerned in the care of children, there was no intention of intruding unasked advice on the managers of schools. Moreover, the inquiry was of a much wider range, and covered not only public elementary day schools, but schools of a higher grade, and of boarding institutions of various kinds which undertook the entire charge of the child's life.

The paper was then read.

MR. C. S. LOCH said that Dr. Francis Warner had in this investigation applied what he might term a statistical microscope to the physical condition of the child population. He had formulated a system of signs as indicating physical condition. Many of these signs people would notice in every-day life casually. But no medical man had hitherto made them the basis of investigation and patiently worked out the results. These results were suggestive. A single defect might mean much or little. The combination of defects as shown in Table VII, the combination, for instance, of nervous defects with abnormal developments, suggested conditions that would have to be remedied if any useful education was to be imparted. And here our system of education was very weak. Advice and means of remedy were not now available for parrying the consequences of defects which might appear of slight importance to a casual observer, but early attention to which would possibly prevent serious mischief. As to other results, girls it appeared fared better than boys; they showed fewer defects, and, beginning life better, it was noteworthy that, grown to womanhood, they outlived men. Jews had fewer defects than Gentiles—a point that should not be forgotten in its relation to immigration. And children in the poorer schools showed healthier conditions than children in the better-to-do schools. "Low nutrition" was not a thing by itself, but connected with various defects and abnormalities. This seemed to justify both a more scientific treatment and, in charity, what he would call the individual method. Only thus would due attention be paid to the different difficulties of different cases. As to practical measures, the evidence pointed to the need of more consultation with doctors as to the condition of children in school, and to the need of continuous treatment in certain cases, either

through the help of a trained nurse attendant at the school, or through the advice of medical men at a dispensary or hospital. It pointed also to the need of trained and painstaking school managers. Without managers who cared for the health of the children, and were prepared to learn how to help them in a multitude of small ways, little could be accomplished. Dr. Warner's figures showed that all classes should attack the question of education in England from a new standpoint—especially education in its relation to the health of the child population.

Mr. J. W. PALMER remarked that although the inquiry was a large one, yet these 50,000 children only represented a small proportion of the number whom it was possible to examine. If they considered the number of public elementary school children in London, they would have to deal, instead of with 234 mentally feeble, with something like 3,000, and of cases requiring special care and training on grounds of physical or mental condition there would be nearly 10,000. These figures showed the importance of the inquiry. The fact was that they were as yet dealing with too small a number, deductions being drawn in some instances from less than 300 cases. With reference to what Mr. Loch had said as to women surviving longer than men, it was curious to notice that, contrary to the rule for defects, there were more cases of low nutrition among the girls than among the boys. Dr. Warner had stated that "defect in development" was associated with, and caused, low nutrition: he would like to hear something as to how far "low nutrition," resulting from under feeding, caused defective development. With a greater number to deal with, no doubt some light could be thrown on this last question, and many other interesting problems solved.

Mr. DAVID CHADWICK said that having had some experience in connection with girls' schools of the higher class, and also as a Governor of the Royal Holloway College, he naturally felt interested in Dr. Warner's paper, and in those who came up for examination there, particularly in those who had failed to pass. He had often asked himself what caused the failure in special cases, where there was no ailment or want of nutrition, &c. It was due often to one defect, and generally attributed to *memory* or want of diligence; and he would like to know what part memory did play in the organisation of a girl or boy failing to pass an ordinary examination. Education could not be drilled mechanically into a boy or girl; the paper had shown that we had serious mental and physical defects to cope with, and these statistics would help to show how to improve or amend the evils. If Dr. Warner would follow up his observations by others made among the Irish, the Jews, and the English upper social classes, he was sure that such investigations would be welcomed by all concerned.

Rev. W. D. MORRISON said that there was no doubt there was a very close connection between human action and the physical

condition of the person who acted ; and he was positive that if the anomalies at present in existence amongst the population could be reduced, both the pauper and the criminal population would also be reduced. It was a remarkable fact that amongst criminals a large proportion of anomalies was found grouped together in very much the same way as had been recorded by Dr. Warner. This was a very practical question from a merely financial point of view. The criminal population cost the country some 10,000,000*l.* a year ; many crimes were caused by the abnormal physical and mental structure of the offender, and if some practical remedies could be devised for reducing the anomalies of the general population, crime would decrease, the taxes could be reduced enormously, and persons and property generally would be much more secure. He would like to ask whether there was any difference observed between children in the country and children in towns. When a city increased in size, its criminal population tended to increase at a still faster ratio, and it would be interesting to learn whether the inhabitants of a town became more anomalous than the country people. The elucidation of this question would naturally require much money and patience, but good results might be arrived at from such an inquiry. If a comparison could be made between the children of Liverpool, for instance, and those of Cornwall and Devon, a practical result would be obtained, and the close connection, which he was positive existed between the moral and physical condition of the people, would be more clearly exhibited. Dr. Warner had pointed out that women were as a rule less defective than men ; it was noteworthy that they were also less criminal. It might be that a woman, being more normally constituted, was therefore less addicted to transgressions of the law. Another interesting point was that the Roman Catholic Industrial and Reformatory Schools in this country, mostly recruited from Irish children, showed a mortality about twice as high as that which prevailed in schools of similar character containing children of English parents, a result which quite harmonised with the statistics of Dr. Warner.

Mr. J. G. RHODES asked whether the work, of which the results had just been placed before them, was intended to point to measures calculated to meet the abnormality of mind and body found among many children, or to prevent and anticipate that condition. He had had a good deal to do with pauper lunatic asylums in London, and had had forced upon his attention conditions of life which could not but result in the procreation of other lives which must almost certainly be deficient or imperfect. He thought a great step would be made if the life history of some of the children presented to Dr. Warner could be traced, so as to endeavour to discover the origin of some of the conditions so unfortunately prevalent. If it could be proved that such children were the offspring of individuals one or both of whom had passed through a lunatic asylum, these latter could be identified, and some conclusions might be drawn as to how the unhappy condition of things recorded had been brought about.

Mr. C. M. KENNEDY asked where these observations had been taken, and to what localities they applied? The only clue afforded by the paper was that they all appeared to have been made in the valley of the Thames, which was altogether an exceptional area from an ethnographic point of view. Besides which it was a very limited area; and in order that observations of this character may possess real significance, they ought to be taken over large areas of country, and include all classes of the population of the several districts thus selected.

Mr. F. HENDRIKS asked if the observations had all been taken by qualified medical men, as it was very important to secure homogeneity on the part of the observers. With regard to Mr. Kennedy's remark, he did not think that, actuarially, any exception could be taken to the figures. They were rather few, but this was necessarily the case in any tentative experiment of this kind, which Dr. Warner had so ably inaugurated.

Mr. R. H. INGLIS PALGRAVE trusted that Dr. Warner would tell them where the twenty schools of the upper social class were, and whether the children in them were of different ranks of life. He also hoped that Dr. Warner, in continuing his inquiry, would include country schools, and children living under different social conditions.

Dr. WARNER, in reply, said that in using the term "defect in development," he did not wish to imply that there was necessarily any real degradation or decadence in the children, or that the conditions among them were now worse than formerly. He considered that these tables showed rather what proportion at the present day remained unevolved to the average type. With regard to the important connection between a bad congenital condition and a tendency to grow thin, he had found that of the 2,000 cases of children who were "thin, delicate, or of low nutrition," some 400 only were of low nutrition and free from defective development. They were almost all development cases. Replying to Mr. Chadwick, he himself put a very low value on memory, and he knew of instances of imbeciles having an excellent memory. It did not prove anything like good intellectual faculty; and he thought an examiner of any experience could always appreciate the difference between a cultivated student and one whose memory had been crammed, by putting a few simple questions, the answers to which required the exercise of a little judgment. Concerning mental faculty of children, he had given at the end of the paper an account of the pupils in a certain school, and some irregular nerve-signs were there detailed. He had pointed out particular defects to the manager of the school which might be put right by drill, training, &c., but he was told that they had no power to use special modes of training. If the teachers could devote more attention to removing the so called nerve-signs, the children would be in a much better condition to receive their moral and mental instruction. With regard to the moral aspect of the case, this

had been with him a primary inducement to take the subject up. There was little or no provision made for the boys who would do wrong and who could not be made to go to school. The parents were sometimes fined although they might have done all they could; while the fault really lay with the boy's defective make. There was no remedy for these parents, nor would there be until it was recognised that there were besides the blind and dumb, other children for whom special provision had to be made, the children who were lower than others, feeble in make and constitution, and who ought equally to be specially dealt with as among "the afflicted classes." At the time of the last meeting of the International Congress of Hygiene and Demography in London, some of the continental representatives said that their governments would not allow them to make any inspections of schools; and they asked that England should take the lead, and that our government should then communicate to theirs what had been done. Our legislature had as yet taken no action, but in America, where they were more eager to get all the information they could, something was being done. In replying to the Rev. W. D. Morrison's observations, Dr. Warner said that he had not found evidence that the country population was better than that of the towns, and he did not think it was. He had seen several schools in the north of England, but without being permitted to take any notes, and it seemed to him that the condition in the northern manufacturing towns was better than in London. The question of heredity was a very difficult one. He was not connected with any asylum, but his experience was that feeble-minded children were often the offspring of exceedingly good parents. Those who came to him (both for private consultation, and the rather lower class which came to the hospital) were in the main above the social class to which they belonged in their power of intellectuality. He was quite aware that this was contrary to the experience of those who had to do with imbecile asylums, and who had a much larger number of cases to deal with than he had. He had evidence, however, that even if there were no heredity, or no offspring from the weak-minded, the evil would not be stopped. The offspring of the insane—as well as the defective—were very likely to be affected with various bad mental conditions rather than with a defective or idiotic mind from birth. In reply to Mr. Hendriks, he wished it to be clearly understood that the whole of the observations had been made by himself.

MISCELLANEA.

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I.—*Commercial History and Review of 1892.*

THE following is taken from the supplement to the *Economist* of 18th February, 1893, in continuation of similar extracts for previous years :—

“ Twelve months ago we wrote that it was impossible to take a very hopeful view of the prospects of trade in 1892. ‘ There are,’ we then said, ‘ some encouraging features, such, for instance, as the cheapness of the raw material for our manufactures. Prices of commodities, moreover, are now so low, that there is less margin for a further fall. On the other hand, however, this very cheapness is forcing producers to reduce working expenses, and it is not unlikely therefore that labour disputes will be even more numerous than they were in 1890 and 1891. Further, some of our foreign customers are not unlikely to be even less able to buy from us than they were in 1891, for whereas we began that year under engagements to supply some of them with more money, these engagements have been fulfilled, and now our purse is closed against them, with no prospect of being open to them again.’ Certain other of our foreign customers, as well as several of our own colonies, we further pointed out, were in financial difficulties which would probably cause them to curtail their purchases of our products, and there was, therefore, more likelihood of a contraction than of an expansion of trade. And, looking back over the year, it is seen that events have moved pretty much in accordance with this forecast. As to our foreign commerce, the record for the year is:—

	1892.	1891.	Increase or Decrease.	
	£	£	£	Per ct.
Imports	423,892,000	435,691,000	−11,799,000	−2·7
Exports of British and Irish produce	227,060,000	247,235,000	−20,175,000	−8·2
Re-exports	64,400,000	61,796,000	+ 2,604,000	+4·2
Total	715,352,000	744,622,000	−29,370,000	−3·9

“There was, it will be seen, a shrinkage in the value of our total trade of close upon 4 per cent., while, if we look only to the imports retained for home consumption and to the exports of British produce, the decline amounts to fully 5 per cent. As regards the imports, however, the year's operations were not by any means so unsatisfactory as a mere comparison of aggregate values would indicate. That we imported a larger amount of foreign produce for re-shipment than we did in 1891 is certainly not an unfavourable feature. Our transit trade is valuable to us, and it is gratifying to find that it is being maintained. And as regards the imports for home consumption, the value of which amounted to 359,492,000*l.*, as compared with 373,894,000*l.* in 1891, the falling off was due not to any diminution in quantity, but wholly to the lower prices at which we were able to purchase the foreign commodities.

“We paid last year 15,643,000*l.* less for our imports than we would have had to pay had prices remained at the level of 1891, and as the actual decline in aggregate value was no more than 14,402,000*l.*, it follows that there was an increase in quantity corresponding to a value of 1,241,000*l.*, or about 0·33 per cent. But, while the volume of our imports was thus more than maintained, there was some curtailment in that of our exports. In the value of these there was a recorded decline of 20,200,000*l.*, and of this, 11,700,000*l.* represents the reduction due to the fall in prices, while 8,500,000*l.* is attributable to diminished shipments. Imports and exports combined, the volume of our trade last year compared with that of immediately preceding years thus:—

Volume of Our Foreign Trade. Increase or Decrease per Cent. as compared with previous Years.

	Imports Retained for Home Consumption.	Exports of Home Produce.	Imports and Exports.
	Per cent.	Per cent.	Per cent.
1892.....	Increase 0·33	Decrease 3·43	Decrease 1·17
'91.....	„ 4·34	„ 5·30	Increase 0·25
'90.....	Decrease 0·31	„ 0·51	Decrease 0·39
'89.....	Increase 11·25	Increase 3·71	Increase 8·08
'88.....	„ 3·42	„ 4·64	„ 3·94
'87.....	„ 5·07	„ 4·80	„ 4·93
'86.....	Decrease 0·37	„ 5·33	„ 1·94

“Further evidence of a slight contraction of trade is afforded by the traffic returns of our railway companies. Taking the fifteen chief English lines, a comparison with 1891 brings out the following result:—

	Passengers and Parcels.		Merchandise.		Minerals.	
	1892.	1891.	1892.	1891.	1892.	1891.
	£	£	£	£	£	£
First six months	12,732,100	12,380,600	9,199,000	9,262,100	6,346,100	6,875,800
Second „	15,353,600	15,322,300	9,670,800	9,711,100	7,233,300	7,053,000
Total for year	28,085,700	27,702,900	18,869,800	18,973,200	13,579,400	13,928,800
Increase or decrease first six months....	+ 351,500 = 2·8 per cent.		- 63,100 = 0·7 per cent.		- 529,700 = 7·7 per cent.	
Increase or decrease second six months }	+ 31,300 = 0·2 „		- 40,300 = 0·4 „		+ 180,300 = 2·6 „	
Total increase or de- crease for year	+ 382,800 = 1·4 per cent.		- 103,400 = 0·5 per cent.		- 349,400 = 2·5 per cent.	

“It is only with the goods traffic that we need here deal, and in that there was a falling off, which, as the following statement shows, contrasts unfavourably with the constant expansion of previous years :—

Increase in Railway Receipts.

	Merchandise.	Minerals.	Merchandise and Minerals Combined.
	Per cent.	Per cent.	Per cent.
1892.....	Decrease 0·5	Decrease 2·5	Decrease 1·4
'91.....	Increase 2·0	Increase 2·8	Increase 2·3
'90.....	„ 2·8	„ 4·1	„ 3·3
'89.....	„ 7·0	„ 6·1	„ 6·6
'88.....	„ 4·1	„ 2·8	„ 3·5
'87.....	„ 1·6	„ 3·6	„ 2·5

“Bearing in mind the continuous extension of our railway system, it is difficult, in view of these figures, to resist the conclusion that the volume of our home as well as our foreign trade suffered a slight diminution last year, and although the contraction was small, it has to be remembered that, with a steadily increasing population, if trade also does not increase, there is relative retrogression.

“Judged by our Index Number, which registers the combined movements of a number of principal commodities, the general level of prices was not much lower at the close of 1892 than it was at the beginning. The record is :—

‘Index Number,’ representing
the Combined Prices of
Twenty-two Leading Commodities.

1st January, 1893.....	2120
„ October, '92.....	2053
„ July, '92.....	2081
„ January, '92.....	2133
„ July, '91.....	2199
„ January, '91.....	2224
„ July, '90.....	2259
„ January, '90.....	2236
„ July, '89.....	2161
„ January, '89.....	2187
„ „ '88.....	2230
„ „ '87.....	2059
„ „ '86.....	2023

"It will be observed, however, that during the first three-quarters of the year there was a decline of nearly 4 per cent., and when we examine the recovery that took place during the December quarter, it is found to be confined to a comparatively few commodities, prominent amongst which are cotton and cotton goods. These, indeed, account for a rise of 42 in the Index Number between the 1st of July, 1892, and the 1st of January last, so that it is evident that the tendency in the majority of other commodities has been downwards rather than upwards. And, if instead of comparing the prices at the beginning and end of the year we take the average for the twelve months, the level is undoubtedly lower than that of 1891. In our imports and exports the average movement for the year was:—

Prices of Imports and Exports. Average Rise or Fall as compared with previous Years.

	Imports Retained for Home Consumption.	Exports of Home Produce.	Imports and Exports.
	Per cent.	Per cent.	Per cent.
1892.....	— 4'17	— 4'91	— 4'46
'91.....	+ 0'50	— 0'93	— 0'08
'90.....	— 1'38	+ 6'41	+ 1'78
'89.....	+ 1'14	+ 2'32	+ 1'61
'88.....	+ 2'89	+ 0'90	+ 2'04
'87.....	— 1'72	— 0'52	— 1'22
'86.....	— 5'67	— 5'35	— 5'53

"It is impossible to place so much reliance upon a table of prices deduced, as this is, from the declared values of imports and exports, as upon one which deals with actual market quotations, because the declarations of value are often made carelessly, to say the least of it. If, however, it cannot be accepted as an exact measure of the movement in prices, it, at all events, shows the direction of the movement, and thus all available statistics go to show that last year manufacturers, as a whole, had to contend not only against a falling off in the demand for their products, but also against declining prices. Of course, even to them the fall in prices has not by any means been an unmixed evil. It has reduced the cost of the raw material for their industries, and helped also to sustain the demand for commodities. Still, a falling market is always a trying one to producers, and that trial they had to continue to undergo last year.

"It is undoubtedly upon our agricultural industry that the fall in prices has told most heavily. Seldom have our farmers had a worse season to struggle against, and when upon a deficient harvest there has been heaped a heavy drop in the prices of nearly all their products, their condition, previously weakened by the prolonged agricultural depression, has become very distressful indeed.

“The movements in the prices of cereals are shown in the following table:—

Gazette Average Price of Wheat (per Imperial Quarter) in United Kingdom immediately after Harvest, 1886-92, and Total Average Gazette Price of Calendar Years.

Periods.	1892.		1891.		1890.		1889.		1888.		1887.		1886.	
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
After harvest	29	4	40	11	35	9	31	2	36	4	29	11	33	1
Calendar year average	30	4	37	—	31	11	29	9	31	10	32	6	31	—

Comparative Gazette Prices of Grain.

Week.	Wheat.						Barley.						Oats.					
	1892.		1891.		1890.		1892.		1891.		1890.		1892.		1891.		1890.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Aug. 6.....	29	7	38	6	35	—	24	—	25	7	23	4	21	9	21	9	20	4
13.....	29	11	38	9	36	3	22	9	26	6	24	5	21	5	21	5	20	5
20.....	29	7	39	4	36	6	23	8	26	4	25	4	21	6	21	2	20	3
27.....	29	4	40	3	35	9	23	11	26	3	31	3	21	2	21	3	19	2
Sept. 3.....	29	1	40	11	34	6	24	2	27	7	30	11	20	3	21	9	19	1
10.....	29	5	41	8	33	7	27	8	29	3	30	3	20	2	21	8	18	8
17.....	29	1	41	2	32	1	27	11	28	11	29	11	19	4	21	1	17	9
24.....	28	4	36	5	31	6	28	3	28	1	29	9	18	10	19	1	17	8
Oct. 1.....	27	10	34	5	31	2	27	11	28	—	29	5	18	—	18	10	17	5
8.....	27	9	34	4	30	11	27	11	28	10	29	3	17	11	18	5	17	5
15.....	28	1	34	10	30	10	27	6	28	11	29	7	17	8	18	7	17	3
22.....	28	7	34	9	31	—	27	9	29	6	29	10	17	11	18	10	17	3
29.....	28	8	35	2	31	6	27	9	29	11	29	7	17	11	18	8	17	3
Nov. 5.....	28	9	35	11	32	1	27	7	30	7	29	5	17	9	19	5	17	3
12.....	28	3	36	7	32	8	27	4	30	11	29	3	18	—	20	6	17	6
19.....	27	11	37	2	32	9	26	7	30	11	28	11	18	—	21	4	17	8
26.....	27	5	38	9	32	7	26	—	31	3	29	—	17	7	22	4	17	8
Dec. 3.....	27	—	39	1	32	3	25	5	30	11	28	9	17	2	22	4	17	10
10.....	26	10	38	11	32	2	25	1	30	9	28	5	17	4	22	2	17	10
17.....	26	4	37	10	32	4	24	6	30	1	28	8	16	10	21	7	17	6
24.....	25	9	36	10	32	3	24	6	29	6	28	5	16	10	21	4	17	11

“However severely it may have pressed upon those engaged in agriculture, to the great body of the people the cheapness of food has proved a very opportune advantage. It has very largely offset the diminution of their earnings, to which the working classes have had to submit. That diminution has resulted not so much from reductions (although reductions there were) of wages, as from the comparative scarcity of employment. In some cases, such, for instance, as the great Durham strike, and the present dispute in the cotton trade, the workmen have deliberately withheld their labour; but even to willing workers the amount of employment offering was less in 1892 than in immediately preceding years. There are twenty-three trade unions that report regularly to the Board of Trade as to the number of their members

who are out of employment, and at the end of last year, eliminating those who were on strike, the proportion of unemployed was 8·3 per cent., which compares with the position at the close of previous years, thus:—

Year.	Proportion of Unemployed. Per Cent.
1892	8·3
'91	4·4
'90	2·4
'89	1·5
'88	3·1
'87	8·5
'86	10·0

“And similar testimony to a lack of full employment is borne by the returns relating to pauperism. We have not yet received the returns for December, but the position at the end of November in this and each of the previous five years was:—

England and Wales.

End of November.	Total Number of Paupers.	Number in every 1,000 in Receipt of Relief.
1892.....	672,722	22·9
'91.....	660,823	22·7
'90.....	675,999	23·5
'89.....	702,396	24·7
'88.....	728,483	25·9
'87.....	740,165	26·6

“For the first time for a number of years the pauper roll showed in 1892 an increase not only in actual numbers, but also in proportion to population, and as, to their credit, our working population will suffer a great deal before they will stoop to what they deem the degradation of accepting poor relief, there can be no doubt that the condition of the working classes, as a whole, underwent last year a change for the worse. That change, however, did not materially affect the consumption of those dutiable articles upon which a large portion of their free income, after providing for the actual necessities of life, is spent. What that consumption was in each of the past four years, the following statement shows:—

Quantities Retained for Home Consumption.

	1892.	1891.	1890.
Tea lbs.	207,113,700	202,456,800	194,008,500
Coffee cwts.	256,200	261,100	256,200
Tobacco lbs.	63,722,300	62,094,800	59,342,500
Wines galls.	14,623,300	14,855,800	15,018,800
Spirits, home proof galls.	31,355,300	30,744,200	29,410,400
„ foreign galls.	8,111,300	8,385,500	8,961,300
Beer..... barrels	31,508,651	31,667,300	31,236,800

“Of late years the consumption of tea and tobacco has been increasing very rapidly, and although the rate of growth was not so great in 1892 as in the immediately preceding year, it still was very considerable. But there was very little growth in spirits, and an actual falling off in beer, and, as when looking to these figures we must bear in mind the increase of population, it is clear that last year the necessity for economising in all but necessary expenditure made itself widely felt. And it would have made itself felt much more distinctly if the masses had not enjoyed the benefit of exceptionally cheap food supplies.

“To the dulness of trade the financial stagnation that continued to prevail throughout the whole of 1892 largely contributed. The investing public have not yet regained the confidence that was so widely shaken by the crisis of 1890; and that is certainly not to be wondered at in view of the disclosures that are still being made as to the recklessness and want of judgment with which the affairs of many of the companies in which they were tempted to place their money have been conducted. The disclosures of the methods of trust company finance in especial—the almost idiotic rashness with which it has been shown that the funds of the shareholders were put into rubbish which it would be a misuse of language to dignify by the designation of securities, and the way in which fictitious profits have been worked out by the overvaluation of securities in order to swell the enormous gains of the founders—disclosures such as these have done more than anything else to spread and perpetuate a feeling of distrust, and will, it is to be feared, continue to exercise that baneful influence for some time to come. The public, therefore, have refused to be tempted into taking part in new industrial or other undertakings. Trade has thus lacked the stimulus which that form of enterprise affords, and the curtailment of the spending power of many of our foreign customers through their inability to raise fresh loans has also, as we have already said, operated strongly to the restriction of business.

“Whether in the current year we are likely to see any improvement in the general condition of trade is a point upon which opinion differs greatly. There are those who think that the worst of the depression has been felt, and that any change now must be a change for the better, while others are of opinion that a lower depth will have to be touched before the recovery that sooner or later must take place begins. And between these two opinions it is difficult to decide. In some respects the outlook certainly is more favourable than it was at the beginning of 1892. The wages readjustments that have been effected during the year have gone some way towards enabling producers to meet the fall in prices by a reduction of working expenses. The paralysis of business in Australia consequent upon the financial crisis is being slowly recovered from. In South America also more business activity is being shown, and if the Argentine Government is only strong and honest enough to come to satisfactory arrangement with the

national creditors, it may again be helped in a moderate way to carry out works for the development of the great natural resources of the country. At home, too, the accumulation of savings which has been forcing up the prices of all first-class securities is not unlikely to begin soon to overflow and seek for fresh channels of investment. It is to be hoped, moreover, that our agricultural industry will not this year have to struggle against such extremely adverse influences as those under which it laboured last year; and finally, the lower level to which the prices of commodities have fallen should help to stimulate consumption and demand. On the other hand, however, the condition of our working classes is not so good as it was twelve months ago, and that must act as a drag upon our home trade, whilst our trade with India and the East may be even more disturbed by the fluctuations in the silver market during 1893 than it has ever been before. For our part, we are inclined to think that the influences working towards the improvement of business are likely to prove stronger than those operating in the opposite direction, but that any recovery that may be experienced will be very gradual and hesitating.

“In 1892, as in 1891, currency questions were much under discussion. In India a strong agitation for the closing of the mints against the free coinage of silver, and the establishment of a gold standard, was carried on, the contention of those by whom it was conducted being, that the Indian Government cannot continue to bear the heavy and increasing loss on exchange to which it is subjected by the fall in silver, and that the constant fluctuations in exchange have utterly disorganised trade between Europe and the East. And that the exchange difficulty, although it has been greatly exaggerated, is a serious one, both to the Government of India and to traders, is unquestionable. But the remedy proposed is worse than the disease. The closing of the Indian mints against silver would precipitate a further fall in the price of the metal; in so far as the attempt to give a scarcity value in India to the rupee was successful, it would be to the detriment of the mass of the people; while a gold standard without a gold currency would be ineffective, and the task of providing India with an adequate gold currency is beyond the power of the Government to accomplish. Accordingly, a committee which was appointed to consider the subject, although it has not yet reported, is understood to have decided against the adoption of the measures proposed. And no better success has attended the active agitation which the bi-metallists have been carrying on. At the instance of the American Government an International Monetary conference was held in Brussels at the close of the year to consider “what measures, if any, can be taken to increase the use of silver in the currency of the nations.” At that conference a number of suggestions for the more extended use of silver for currency purposes were made, but none of them were seriously discussed. It was found, indeed, that no common ground upon which an agreement could be arrived at existed, and ultimately it was decided to adjourn until the 30th May.

The formal motion of adjournment was couched in terms expressing 'the hope that during the interval the careful study of the documents submitted to the conference will have permitted the discovery of an equitable arrangement which shall not infringe in any way the fundamental principles of the monetary policy of the different countries.' In their report, however, the British delegates state that 'we are unable to share these hopes. It appeared to us that the discussions had shown such divergence of interests that there was little more prospect of an agreement after an interval of a few months. We did not, however, think it politic to oppose a wish generally entertained by the conference, and therefore contented ourselves with expressing doubts as to the advantages to be gained from further meetings, and urged that under no circumstances should the conference be called together again except for the consideration of a definite proposal emanating from the Government of the United States or some other Government.' It remains now to be seen what action will be taken by the United States. Opinion there is growing in intensity against the maintenance of the Sherman law, which compels the Treasury to purchase 4,500,000 ounces of silver every month, and it is probable that when the new government assumes office next month prompt action will be taken for its repeal.

"Investors, as has already been said, were not in a mood last year to respond to appeals for new capital, and, knowing this, the applications of financiers and company promoters were on a comparatively small scale. They amounted in all to 81,137,000*l.*, which compares with the total for previous years thus:—

	1892.	1891.	1890.	1889.
	£	£	£	£
1st quarter	30,943,000	30,549,000	30,243,000	54,846,000
2nd "	28,133,000	24,808,000	59,510,000	49,866,000
3rd "	7,716,000	16,936,000	39,103,000	34,526,000
4th "	14,345,000	32,302,000	13,709,000	48,198,000
	81,137,000	104,595,000	142,565,000	189,436,000

"Classifying the applications of last year:—

	1892.
	£
Foreign governments	23,139,000
Colonial and Indian Governments	7,694,000
English corporations	5,143,000
Colonial and foreign corporations	2,503,000
Home railways	6,165,000
Colonial and Indian railways	4,181,000
United States railways	4,221,000
South American and foreign	6,289,000
Trust companies.....	2,287,000
Breweries	1,357,000
Mining	1,853,000
Miscellaneous	16,305,000
	81,137,000

"From the *Investors' Monthly Manual* we take the following comments upon this list. Of the above amount of new capital, 23,000,000*l.* sterling were applied for by foreign governments, and of this sum 19,000,000*l.*—made up of a German loan of 14,000,000*l.* and a Dutch loan of 5,000,000*l.*—were subscribed abroad in their practical entirety. The remainder of the total sum applied for by foreign governments was divided mainly between the Transvaal and Chili. The Australasian colonies tempted the market now and again by offering more favourable terms than in previous years, but their loans, the principal of which was one of 2,000,000*l.* offered by Victoria, by no means met with a warm welcome. English corporations, especially Manchester, in connection with its ship canal, borrowed more heavily than usual. The total sum applied for during the year was 5,000,000*l.* A loan of 5,000,000*l.* by the new Lancashire, Derbyshire, and East Coast Railway, to stretch, as its name implies, right across the country, constitutes the bulk of the capital applied for by home railways. Colonial and Indian railways applied for over 4,000,000*l.*, and American railroads for a similar amount. 6,000,000*l.* were applied for by railways in other parts of the world. Colonial and foreign corporations have applied for 2,500,000*l.*, breweries for 1,250,000*l.*, and mining companies for 1,750,000*l.* Some of the trust companies found it necessary to raise more capital by borrowing in the market to the extent of 2,250,000*l.* These are the principal groups into which the capital applications of the year can be divided, but one of the features has been the large amount applied for by small businesses of such a miscellaneous character that they do not lend themselves to classification, and many of which are obviously unsuited for carrying on in the joint-stock form. These small companies, very few of which have applied individually for more than 200,000*l.*, have in the aggregate sought at the hands of the public the large sum of over 16,000,000*l.*, or one-fifth of the total capital applications of the year.

"In the amount of calls for previously subscribed capital there was also a large decrease last year, as the following ten years' record will show:—

	Capital Created and Issued.			Actual Money Calls.		
	In England.	England and Elsewhere.	Total.	In England.	England and Elsewhere.	Total.
	£	£	£	£	£	£
In 1892....	53,197,091	27,940,086	81,137,177	47,212,458	12,049,601	59,262,059
" '91....	80,239,270	24,355,640	104,594,910	66,809,596	9,234,200	76,043,796
" '90....	125,898,000	16,667,000	142,565,000	120,717,000	20,290,000	141,007,000
" '89....	178,930,000	28,107,000	207,037,000	152,012,000	15,791,000	167,804,000
" '88....	140,758,000	19,497,000	160,255,000	125,864,000	11,388,000	137,252,000
" '87....	96,770,000	14,439,000	111,209,000	84,161,000	9,507,000	93,668,000
" '86....	93,946,000	7,927,000	101,873,000	70,342,000	17,134,000	87,476,000
" '85....	55,558,000	22,414,000	77,972,000	62,824,000	15,051,000	77,875,000
" '84....	91,520,000	17,511,000	109,031,000	74,255,000	16,348,000	90,603,000
" '83....	69,650,000	11,500,000	81,150,000	63,600,000	13,300,000	76,900,000

“The record of the money market for 1892 is singularly uneventful. At the beginning of the year the bank rate stood at $3\frac{1}{2}$ per cent., but in the last week of January it was lowered to 3 per cent. At that figure it remained till the first week in April, when a further reduction to $2\frac{1}{2}$ per cent. took place; and a month later, in the beginning of May, there was another downward movement to 2 per cent. At this bottom point it stood for nearly six months, until, towards the close of October, large foreign withdrawals of gold compelled the directors to raise it to 3 per cent., at which it remained until the close of the year. Thus the changes in the bank rate were exceptionally few, and the range of the fluctuations exceptionally narrow. How 1892 compared in these respects with previous years the following record will show:—

	1892.	1891.	1890.	1889.	1888.	1887.	1886.	1885.	1884.	1883.
Change bank rate	4 p. ct.	12 p. ct.	11 p. ct.	8 p. ct.	9 p. ct.	7 p. ct.	7 p. ct.	7 p. ct.	7 p. ct.	6 p. ct.
Highest „	$3\frac{1}{2}$	5	6	6	5	5	5	5	5	5
Lowest „	2	$2\frac{1}{2}$	3	$2\frac{1}{2}$	2	2	2	2	2	3
Average „	2/9/11	3/5/11	4/10/4	3/14/10	3/6/3	3/6/-	3/-/4	2/16/9	2/19/2	3/11/6
Average market rate best three months' bills	1/9/5	2/10/-	3/13/11	2/15/6	2/7/-	2/7/3	2/1/-	2/-/9	2/8/1	3/-/8
Market below bank..	1/-/6	15/11	16/5	19/4	19/3	18/9	19/4	16/-	11/1	10/10

“To bankers the year was not a satisfactory one, for the margin between their lending and their deposit rates was unusually small, while, owing to the dulness of trade and the stagnation of Stock Exchange business, it was extremely difficult to find adequate employment for their funds. It was the London banks that suffered most from this state of things, for it is to London that surplus capital tends to gravitate, and here, therefore, that the competition of lenders is keenest. More favourably situated as regards competition, the country banks, as a rule, contrived to earn as big profits as usual, but as the London banks are now seeking to extend their direct country connection, the tendency will be for the provincial banks to get rather less of their own way in future:—

European Rates of Discount per Cent. per Annum, 1892.

Cities.	Beginning of Months of 1892.												
	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ave.
<i>London.</i>	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
Bank rate	3½	3	3	3	2	2	2	2	2	2	3	3	2·49
Open market	2¼	2	2	1½	1½ ¹ / ₁₆	7⁄8	7⁄8	7⁄8	1¼	1	2½	2½	1·47
<i>Paris.</i>													
Bank rate	3	3	3	3	3	2½	2½	2½	2½	2½	2½	2½	2·66
Open market	2¾	2½	1¾	1¾	1¾	1	1¾	1¾	1½	1½	2¾	2¾	1·83
<i>Vienna.</i>													
Bank rate	5	4	4	4	4	4	4	4	4	4	4	4	4·02
Open market	4¾	3¾	3¾	3¾	3½	3½	3¾	3¾	3½	3¾	3¾	3½	3·74
<i>Berlin.</i>													
Bank rate	4	3	3	3	3	3	3	3	3	3	4	4	3·20
Open market	2½	1½	1½	1¾	1½	1¼	1¾	1¾	1½	1¾	2½	2½	1·78
<i>Frankfort.</i>													
Bank rate	4	3	3	3	3	3	3	3	3	3	4	4	3·20
Open market	3	1¾	1¾	1¾	1¾	1½	2	1½	1¾	2	2¾	2½	2·08
<i>Amsterdam.</i>													
Bank rate	3	3	3	3	3	2½	2½	2½	2½	2½	2½	2½	2·70
Open market	2½	2¾	2½	2¼	2½	1¾	1¾	1¾	1½	2¼	2¼	2½	2·18
<i>Brussels.</i>													
Bank rate	3	3	3	3	3	2½	2½	2½	2½	2½	2½	2½	2·70
Open market	2¾	2½	2¾	1¾	2	1¾	1¾	1¾	1¾	1½	1¾	1¾	1·99
<i>Hamburg.</i>													
Bank rate	4	3	3	3	3	3	3	3	3	3	4	4	3·20
Open market	2¾	1¾	1½	1¾	1½	1¾	1¾	1¾	1¾	1¾	2¾	2¾	1·79
<i>St. Petersburg</i>													
Bank rate	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	5½	4·88
Open market	6½	6½	4¼	4¼	4	4	4	4	4	4	4	4	4·46

“The movements in the silver market during the year are thus reported upon by Messrs. Pixley and Abell:—Silver.—The price on 1st January, 1892, was 43¾*d.*, and, as events proved, this was the highest point of the year, and, in spite of fairly good orders both for India and home coinage, decline at once set in. During January great pressure was exerted from New York, and by 2nd February the price fell to 41½*d.*, up to this point a fresh record on that of May, 1888. Although never believed in by anybody, the actual defeat of a Bill for the free coinage of silver was made use of for depressing the market, and this was accentuated later on by persistent rumours that Austria, in inaugurating a gold standard, would sell all her silver. During this period of decline both India and Japan took large amounts of silver, notwithstanding which the market reached 39*d.* on 28th March. Subsequent orders for Spain and the Continent caused some recovery, but, before long, India again became the only buyer, and prices relapsed to Indian parity, fluctuating between 39½*d.* and 40¾*d.* During June, business complications caused special demand for eastward remittances, and on the 8th silver rose to 41½*d.*, only

to fall to $40\frac{1}{8}d.$ by the end of the month. For a few days prices were maintained, but, after 5th July, silver did not again touch the forties for the remainder of the year. The defeat of Mr. Harrison in the Presidential elections, was taken as inimical to silver, and continual sales precluded the chance of recovery. The lowest point of the year was $37\frac{7}{8}d.$ on 12th August, and at this time there seemed every chance of still further decline, had not the India Council refused to sell their drafts under $1s. 2\frac{5}{8}d.$, which imparted some degree of steadiness. Good orders for the East, together with considerable scarcity of supply, conduced to a firmer market. The Monetary Conference met at Brussels in December, but after numerous propositions to ameliorate the position of silver had been discussed fruitlessly, an adjournment was made to May, 1893. In consequence of this fears were entertained by those sending silver to India that the Indian authorities would take independent action, and that by closing their mints to unlimited silver and initiating a gold standard for India, an effort would be made to give more stability to the value of the rupee. Immediate action on the part of Congress was also looked for, and the repeal of the Act for purchasing 4,500,000 ounces per month was anticipated. India, therefore, would not purchase silver except for immediate delivery, and such amounts as were sold for forward delivery had to submit to a heavy discount.

"The monthly fluctuations during the past five years are shown in the following table:—

Monthly Fluctuations in Price of Bar Silver.

	1892.		1891.		1890.		1889.		1888.	
	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>	<i>d.</i>
January	$43\frac{3}{4}$	$41\frac{3}{4}$	$48\frac{3}{4}$	$46\frac{7}{8}$	$44\frac{7}{8}$	$44\frac{1}{8}$	$42\frac{1}{10}$	$42\frac{3}{8}$	$44\frac{9}{16}$	$44\frac{1}{4}$
February.....	$41\frac{1}{8}$	$41\frac{1}{8}$	$46\frac{3}{4}$	$44\frac{1}{2}$	$44\frac{3}{8}$	$43\frac{1}{10}$	$42\frac{1}{4}$	$42\frac{1}{2}$	$44\frac{1}{10}$	$43\frac{3}{10}$
March	$41\frac{5}{8}$	39	$45\frac{5}{16}$	$44\frac{3}{8}$	$44\frac{3}{8}$	$43\frac{3}{4}$	$42\frac{3}{8}$	$42\frac{1}{4}$	$43\frac{3}{4}$	43
April	$40\frac{1}{8}$	$39\frac{1}{4}$	45	$43\frac{3}{8}$	48	$43\frac{3}{8}$	$42\frac{5}{16}$	$42\frac{1}{16}$	$42\frac{1}{2}$	$42\frac{1}{2}$
May	$40\frac{3}{8}$	$39\frac{1}{16}$	$45\frac{1}{8}$	$44\frac{1}{4}$	$47\frac{1}{2}$	46	$42\frac{1}{4}$	$41\frac{1}{10}$	$42\frac{5}{8}$	$41\frac{5}{8}$
June	$41\frac{1}{8}$	$40\frac{1}{16}$	46	$44\frac{1}{4}$	49	$46\frac{1}{4}$	$42\frac{3}{16}$	42	$42\frac{1}{2}$	42
July.....	$40\frac{1}{4}$	$39\frac{1}{8}$	$46\frac{3}{8}$	$45\frac{5}{8}$	$50\frac{7}{8}$	$47\frac{9}{16}$	$42\frac{5}{16}$	42	$42\frac{1}{16}$	42
August	$39\frac{1}{16}$	$37\frac{7}{8}$	$46\frac{1}{8}$	$45\frac{1}{16}$	$54\frac{1}{2}$	$50\frac{3}{4}$	$42\frac{9}{16}$	$42\frac{1}{4}$	$42\frac{8}{8}$	$41\frac{5}{16}$
September	$38\frac{5}{16}$	$38\frac{3}{8}$	$45\frac{5}{16}$	$44\frac{3}{4}$	$54\frac{5}{8}$	50	$42\frac{1}{16}$	$42\frac{3}{8}$	$44\frac{3}{16}$	$42\frac{1}{16}$
October	$39\frac{5}{8}$	$38\frac{1}{8}$	45	$44\frac{1}{16}$	$51\frac{1}{2}$	$48\frac{1}{8}$	$43\frac{1}{2}$	$42\frac{3}{8}$	$42\frac{3}{8}$	$42\frac{7}{8}$
November	$39\frac{1}{4}$	$38\frac{3}{4}$	$44\frac{1}{16}$	$43\frac{1}{2}$	$48\frac{3}{4}$	45	$44\frac{3}{8}$	$43\frac{1}{4}$	$43\frac{1}{4}$	$42\frac{7}{8}$
December	$39\frac{3}{16}$	$37\frac{1}{16}$	$44\frac{1}{4}$	$43\frac{1}{2}$	$49\frac{1}{2}$	$47\frac{1}{4}$	$44\frac{3}{8}$	$43\frac{3}{4}$	$42\frac{7}{8}$	$42\frac{5}{16}$
Yearly avge.	$39\frac{1}{16}$		$45\frac{1}{16}$		$47\frac{1}{16}$		$42\frac{1}{16}$		$42\frac{7}{8}$	
Highest price	$43\frac{3}{4}$		$48\frac{3}{4}$		$54\frac{5}{8}$		$44\frac{3}{8}$		$44\frac{9}{16}$	
Lowest „	$37\frac{7}{8}$		$43\frac{1}{2}$		$43\frac{1}{16}$		$41\frac{1}{16}$		$41\frac{5}{8}$	

"The following *résumé* of the movements on the stock markets during the year is condensed from the *Economist*:—Dulness will be said by many to have formed the leading characteristic of the past Stock Exchange year; and doubtless the complaint that business has been slow is not without foundation. It is purely as regards speculative business, however, that the complaint is

justified. The volume of investment business proper was by no means small. It appears, in fact, to have been enhanced by this very curtailment in speculative business which has made itself so sorely felt in the market. The effects of the shock which credit received in the latter part of 1890 are still distinctly traceable, being the more prolonged because they were not allowed to work themselves out naturally at the time, and now, on looking back over 1892, we find that people have been cautious, sometimes to the verge of nervousness, throughout the whole year, and that their capital, removed from South American securities and the kindred concerns, such as trust companies, which were involved in the vortex of the Baring collapse, and removed even from classes of securities which, although not connected with the River Plate, are still of a more or less speculative nature, has sought safer channels in securities of a sound description. Other circumstances have pointed to the desirability of caution, such as the silver difficulties, the heavy banking losses in the East and in Australasia, the cholera epidemic on the Continent, and the failure of small banks and building societies. Some of these, it is true, have exerted very little influence on the Stock Exchange, but all of them have involved, at least, a little uneasiness, and, at any rate, they have certainly not tended to counteract that antipathy to risky enterprise which always follows a crisis. Circumstances have thus combined to keep speculation of all kinds in abeyance. The capital which ventured to the Stock Exchange found its way into the highest class Home Government securities, debentures, and miscellaneous investments, which although yielding low profits, were attended with the minimum of risk. The only stock amongst the *élite* of the Stock Exchange that has not advanced is Bank of England stock, but even in this case the fall which followed the new arrangement entered into with the Government has been recovered. Colonial stocks, although still looked upon with some coolness, were in less disfavour than in 1891, and partly regained the fall which then took place. Other stocks of a very high class character are those of the different corporations of the United Kingdom, and here again there was a noticeable advance. In the same way, other high class securities benefited by the diversion of funds to which we have referred, such as some of the English railway debenture and preference stocks; and even some of the leading ordinary railway stocks were tightly held by investors, the scarcity at many of the settlements of the year being a memorable feature. Many railway ordinary stocks, however, are of a somewhat speculative nature, and amongst this class of securities the movement was downward in nearly every case. American railroads were also affected adversely by the circumstances of the year. The prospects of large profits to be derived from the abundant cereal harvest of 1891 sent up prices very rapidly, and the reaction which subsequently asserted itself was to a great extent the result of disappointed hopes in this respect. The gross receipts of the railroads, it is true, expanded considerably, but there was not a corresponding increase in net earnings, and the shareholders, after all, derived but little actual profit even from the exceptional cir-

cumstances which favoured the properties. This is one reason why American railroads have not been in favour with the public, and over and above it is the fact that the speculative nature of the securities, as in the case of other markets, has alienated public support, and, whilst the more solid bonds have found favour, dealings have been left very much in the hands of inside operators. Silver securities sustained a heavy fall during the year, and the prospects of any strong artificial support being afforded to the value of silver have not been improved by the barren results of the International Monetary Conference. In the market for foreign government securities there was a general advance. European government stocks nearly all advanced, and in the case of such securities as Russian and Italian, for instance, it must be admitted that it is difficult to see upon what the improvement is based. A marked exception to the general rise is seen in the case of Portugal, and this is accounted for, of course, by the country having virtually committed default in the payment of its interest. In tardy obedience to the strenuous efforts made by those interested to push the quotations up, River Plate securities show a net rise on the year, after the previous collapse. The only reasons for the rise in Argentines that can be found are an apparent improvement in the commerce of the country from the low ebb it reached last year, and, what seems to have weighed with the market even more, the decline in the manipulated premium on gold at Buenos Ayres. The real value of Argentine securities can only be gauged, even approximately, when the country's proposals as to the inevitable debt reduction are made known. The better class of miscellaneous securities all met with considerable favour during the year, a prominent exception, however, being foreign banks, especially some of the Eastern banks, whose difficulties, brought about chiefly by frauds engendered by the speculative spirit, caused much anxiety during the year. The Australasian banks also suffered severely from the financial collapse in the colonies. There were several spurts amongst the South African mining shares, but these were, to a great extent, engineered by insiders, who grasped the opportunity afforded them by the rapidly growing returns from the Randt to foist concerns of more or less worthlessness on the public. Some of the South African land companies improved in value in connection with the railway extension there. Trust companies were pushed forward simultaneously with the rise in South American securities, in which so many of them are deeply interested, but the difficulties which many were bound sooner or later to encounter have been making themselves felt."

II.—*Agricultural Returns of 1892.*

[The following is extracted from the Report of the Director of the Statistical Department of the Board of Agriculture on the Returns now published for 1892.]

The arable land, as has been the case in every year but two since 1872, again shows a reduction. The surface appearing in this category is 157,000 acres less than in 1891. The permanent pasture in 1892¹ is also less than that returned in 1891 by 76,000 acres. This is a change in the opposite direction to those recorded for a considerable period, but it is wholly explained by a stricter definition of the term permanent grass now enforced in certain mountainous counties, where some of the additions made in 1891 to this category were found on closer inquiry not to have been fully justified, the area in question being again relegated to the class to which they properly belonged, of uncultivated hill grass, the limits of which it has this year been possible more closely and consistently to define, in connection with the special inquiry into the extent of unenclosed mountain land carrying live stock. (See pp. 118—120.)

The characteristic changes of the two great sections of the cultivated area which have taken place between 1872 and 1892, may be shown for *Great Britain* as a whole as under :—

Years.	Arable.	Pasture.	Total Cultivated Area.
	Acres.	Acres.	Acres.
1872.....	18,428,000	12,576,000	31,004,000
'82.....	17,492,000	14,821,000	32,313,000
'92.....	16,327,000	16,358,000	32,685,000

We are left therefore with 2,101,000 less acres under arable culture, but with a grass area which is 3,782,000 larger than was recorded as lying within the cultivated surface of *Great Britain* in 1872. The augmentation of the permanent pasture, beyond what can be accounted for by the laying down to pasture of the land passing out of arable culture, is due to the series of reclamations and extensions annually reported, and to the increased accuracy and scope of the yearly returns of *Great Britain* in the first of the two decades under consideration.²

It would appear that since 1872 *England* alone has diminished her arable area by 1,952,000 acres, or over 14 per cent., and *Wales* has reduced her arable surface by 227,000 acres, or 21 per cent., but *Scotland* returns more arable land than before by some 78,000 acres. This may be partly explained by the marked characteristic of the agricultural system of *North Britain* in contrast with that of *England*, which appears in the relatively

¹ On the 4th of June.

² The present is the first year in which the area of the arable land of *Great Britain* has been returned as less than that of the permanent pasture.

large area retained under clover and rotation grasses. Nearly 33 per cent. of the whole cultivated surface of Scotland remains in this category, while in England the proportion of the cultivated area so occupied is less than 11 per cent. of the whole. It may be noted that the area under oats has been increased by nearly 100,000 acres in England.

By incorporating the data supplied by the Irish returns and those for the Isle of Man and the Channel Islands, with the statistics collected for Great Britain, it is possible to obtain a general view of the agricultural position of the United Kingdom. In the Irish corn crops the increased acreage under oats overbalances the decline in wheat and other grains, and grass in all forms shows an increase, but in other respects the changes are in much the same direction as in Great Britain. A smaller area under flax is again reported. Under the head of horses, cattle and sheep, the Irish increases are all greater in proportion than in Great Britain. The more important alterations between 1891 and 1892 occurring in the entire *United Kingdom*, may be summarised in the accompanying table:—

TABLE I.

Acreage.	1892.	1891.	1892 compared with 1891.	
			Increase.	Decrease.
	Acres.	Acres.	Acres.	Acres.
Total cultivated area	47,977,903	48,179,473	—	201,570
Total of permanent pasture	27,533,326	27,567,128	—	33,808
„ arable land	20,444,577	20,612,345	—	167,768
Corn crops	9,328,701	9,443,509	—	114,808
Green „	4,467,105	4,510,653	—	43,538
Clover, &c., under rotation	5,973,456	6,015,037	—	41,581
Flax	72,065	76,477	—	4,412
Hops	56,259	56,145	114	—
Small fruit	62,547	59,122	3,425	—
Bare fallow	484,434	451,402	33,032	—
<i>Live Stock.</i>	Number.	Number.	Number.	Number.
Horses	2,067,549	2,026,170	41,379	—
Cattle	11,519,417	11,343,686	175,731	—
Sheep	33,642,808	33,533,988	108,820	—
Pigs	3,265,898	4,272,764	—	1,006,866

The most striking, if not the most important, of the changes indicated by the returns of 1892, is the large reduction in the total stock of pigs in the whole kingdom. Special inquiries made indicate that the low prices prevailing some time back led many farmers to diminish or discontinue pig breeding as unprofitable, while the subsequent rise in the value of these animals made it difficult to re-stock as rapidly as is sometimes done. As the prices of bacon and pork have been of late abnormally high in

contrast with other forms of meat, it is likely that pig breeding will be again stimulated, as the question of price has been obviously the governing factor in the general diminution.

Although making only a very unimportant change in the total area accounted for in Great Britain as under crops, bare fallow and grass, it is to be noted that, in the current year, the collection by schedule of the customary data has been restricted to occupiers who farm more than an acre of cultivated land. This change will, it is anticipated, remove certain difficulties in discriminating hereafter between agricultural holdings proper and detached allotments or plots of the nature of gardens. These difficulties have been frequently felt, and were brought specially under the notice of the department during the preparation of the return of Allotments and Small Holdings in 1890. The surface omitted in this re-classification is estimated not to exceed one-tenth of 1 per cent. of the cultivated area, and the plots which have now disappeared from the annual returns offered little room for annual variation in the crops grown.

An attempt has been made this year to exhibit in these returns, not, of course, with the degree of accuracy which can be employed in the case of cultivated land, but in the form of a more or less approximate estimate, the probable extent of the area lying outside of the cultivated acreage, but employed nevertheless to assist, in some degree, in furnishing support to the live stock, and especially the sheep, which have been annually enumerated in these statistics. On more than one occasion it has been necessary to offer a caution as to the allowance which ought to be made in quoting the otherwise apparently impossible proportion of sheep to the nominally cultivated acreage in certain mountainous districts, and in many parts of Scotland. The existence of an extensive but only partially productive area of sheep runs and hill grazings outside and beyond the permanent grass annually recorded, is now made apparent; and so far as Scotland is concerned, ample confirmation has been obtained of the suggestion that several millions of acres—much more in fact than the whole cultivated area accounted for—was employed in providing a subsidiary maintenance to the flocks of sheep farmers.

It would appear that the rough hill grazings and unenclosed mountain lands, over which sheep and other live stock range, and whereon they obtain a more or less scanty subsistence, cover approximately a territory of over 12,000,000 acres, or more than one-fifth of the surface of Great Britain. More than three-fourths of this estimated acreage of rough pasture have been recorded in Scotland alone. The counties of Argyle, Inverness, Ross and Cromarty, and Sutherland, alone return over 5,000,000 acres of the Scottish total, while the entire cultivated surface of these counties is less than half a million acres. The English hill grazings not before accounted for are naturally far below the figures for Scotland, the estimate only reaching 1,862,000 acres, whereof the counties of Northumberland, Cumberland, Westmoreland, and York furnish more than two-thirds. The Welsh hill grazings not previously enumerated would appear to cover approximately 953,000 acres.

TABLE II.—Average PROPORTION of the Surface under Woods and PLANTATIONS, of the Approximate Extent of MOUNTAIN and HEATH LAND used for Grazing, and of the Acreage of CULTIVATED LAND under Crops, Bare Fallow and Grass, in each Division of the United Kingdom, in the Year 1892, per 1,000 Acres of the Total Area of Land and Water.

Proportional Area of	England.	Wales.	Scot-land.	Great Britain.	Ireland.	United Kingdom. ^b
Total surface of land and water^a	1,000	1,000	1,000	1,000	1,000	1,000
Woods and plantations ^{c d}	50	37	46	48	15	39
Mountain and heath land used } for grazing.....	57	199	477	213	e	e
Cultivated land	767	598	252	576	732	618
Permanent pasture ^f	401	415	69	288	538	355
Arable land	366	183	183	288	194	263
Corn crops	188	85	67	138	72	120
Green „	77	25	33	58	57	58
Clover and rotation grasses	84	71	83	82	61	77
Flax, hops, and small fruit	3	g	g	2	3 ^h	2 ^h
Bare fallow.....	14	2	g	8	1	6

^a Not including tidal water.

^b Including the Isle of Man and the Channel Islands.

^c „ „ nursery grounds.

^d As in 1891.

^e Cannot be given.

^f Exclusive of mountain and heath land.

^g Less than half an acre per 1,000 acres of the total surface.

^h Exclusive of small fruit in Ireland.

It may also be legitimate to note that, in certain sections of the United Kingdom at all events, much difference is caused in the proportional statement of live stock carried on a given surface, according as the area treated of happens to be that regarded as “cultivated,” or that which would be obtained were account taken also of the rough grazing areas above noted, while a further difference of results is apparent if such calculations be made on the entire measured surface of land and water. A new Table (III) enables this contrast to be seen. By its aid it will be observed that while in England, and still more in Wales, considerable differences are shown in the stock of cattle carried on each 1,000 acres of the cultivated area, or of the cultivated area and hill grazings combined, or again on the total surface, in Scotland the differences are still more striking. There it appears the horses used in agriculture, which appear as 41 per 1,000 acres “cultivated,” are only 14 per 1,000 acres cultivated and grazed, and only 10 per 1,000 of the total surface. The cattle also, instead of being 249 to each 1,000 cultivated acres, would come out as 86 and 63 to the 1,000 acres of the combined cultivated and grazed territory, and of total surface respectively; while the sheep, instead of being 1,539 per 1,000 acres of the cultivated acreage, are reduced to 532 per 1,000 acres of the larger area which as a matter of fact carries them, and they fall to 388 per 1,000 of the total surface of the country.

TABLE III.—Average Proportion of the NUMBER of each kind of Live Stock in 1892 per 1,000 acres of CULTIVATED LAND,* of LAND used for AGRICULTURE* (including Hill Grazings), and of the TOTAL SURFACE of LAND and WATER.†

Description of Animals.	England. Per 1,000 Acres of			Wales. Per 1,000 Acres of			Scotland. Per 1,000 Acres of			Great Britain. Per 1,000 Acres of		
	Cultivated Land.	Land used for Agriculture.	Total Surface.	Cultivated Land.	Land used for Agriculture.	Total Surface.	Cultivated Land.	Land used for Agriculture.	Total Surface.	Cultivated Land.	Land used for Agriculture.	Total Surface.
	Number.	Number.	Number.	Number.	Number.	Number.	Number.	Number.	Number.	Number.	Number.	Number.
Horses—												
Used solely for agriculture	32	30	25	28	21	16	30	11	8	31	23	18
Unbroken horses	13	12	10	20	15	12	10	3	2	13	10	8
Mares kept solely for breeding	2	2	1	4	3	3	1	—	—	2	1	1
Total	47	44	36	52	39	31	41	14	10	46	34	27
Cattle—												
Cows and heifers in milk or in calf	77	71	59	102	76	61	91	31	23	81	59	47
Other { 2 years and above	50	46	38	51	38	30	56	20	14	51	37	29
cattle { under 2 years	72	68	56	111	84	67	102	35	26	80	59	46
Total	199	185	153	264	198	158	249	86	63	212	155	122
Sheep—												
1 year old and above	438	408	336	754	566	451	996	344	251	549	401	316
Under 1 year old	284	264	218	364	273	218	543	188	137	330	241	190
Total	722	672	554	1,118	839	669	1,539	532	388	879	642	506
Pigs	73	68	56	69	52	41	23	8	6	65	48	38

* Not including woods and plantations or nursery grounds.

† Not including tidal water.

The average prices of wheat, barley, and oats in the year now closing compared with 1891, have fallen per quarter, in the case of wheat 6s. 9d., in the case of barley 2s., and in the case of oats 2d. A wider comparison with the prices of each of the years 1872 and 1882 shows:—

Year.	Wheat.		Barley.		Oats.	
	Per quarter.		Per quarter.		Per quarter.	
	s.	d.	s.	d.	s.	d.
1872.....	57	—	37	5	23	2
'82.....	45	1	31	2	21	10
'92.....	30	3	26	2	19	10

No average prices of meat or other produce are obtained on any similar system, but the general range of the prices quoted at the Metropolitan Cattle Market in the same years may, perhaps, be given as under. The estimated prices for the current year, which cannot yet find a place in the completed tables, are all below 1882, but for beef they show little variation from the prices of the past six years. Mutton prices are lower, and those of pork are higher than in recent years:—

Year.	Beef.		Mutton.		Pork.	
	Per 8 lbs.		Per 8 lbs.		Per 8 lbs.	
	s.	d.	s.	d.	s.	d.
1872.....	4	2 to 5	4	10 to 6	3	6 to 4
'82.....	4	— „ 6	5	4 „ 7	4	3 „ 5
'92.....	2	11 „ 4	3	7 „ 5	2	11 „ 4

At the date of completing this report the imports and exports of agricultural produce can only be shown in detail up to the end of 1891. The totals, measured by values of four out of the five groups of imports exhibited an increase in 1891 over 1890—imports of food in the form of live animals alone showing a decrease. The live cattle imported in 1891 were 507,000 against 643,000 in the year 1890, while the sheep received in 1891 were 344,000 compared with 358,000 in 1890. On the other hand, the supplies of fresh meat were again augmented, a total of 1,921,000 cwt. of fresh beef and 554,000 cwt. of beef preserved otherwise than by salting being received. The fresh mutton imports barely exceeded the large quota of 1890, reaching 1,663,000 cwt. in all. Adding to this total 65,000 cwts. of preserved mutton, it may be noted that the equivalent in carcasses of this great importation

represented in dead meat nearly 10 sheep to 1 of the sheep imported alive. (See Table IV.)

TABLE IV.—*Imports of some of the Principal Food Stuffs in 1871, 1881, and 1891.*

	1871.	1881.	1891.
	Value. £	Value. £	Value. £
Cattle and beef	4,218,000	8,915,000	14,270,000
Sheep and fresh mutton	1,790,000	2,192,000	4,082,000
Pigs and bacon, hams and pork	3,710,000	11,493,000	10,042,000
All other forms of meat	770,000	2,154,000	713,000
Total	10,488,000	24,754,000	29,107,000
Eggs	1,264,000	2,322,000	3,506,000
Butter and margarine	6,939,000	10,866,000	15,149,000
Cheese	3,341,000	5,245,000	4,813,000
Condensed milk	—	—	900,000
Total dairy produce	11,544,000	18,433,000	24,638,000
Wheat and flour	26,817,000	40,737,000	39,633,000
Maize	6,469,000	10,408,000	8,412,000
All other corn and meal	9,405,000	9,711,000	13,977,000
Total of corn, meal, and flour	42,691,000	60,856,000	62,022,000

In 1871, 85 per cent. of the cattle and beef imported consisted of live cattle, this proportion in 1891 was reduced to 60 per cent. In mutton the whole recorded import twenty years ago consisted of live sheep: the trade in frozen carcasses only came into notice in 1882, but it so largely developed subsequently that in 1891 only 16 per cent. of the foreign mutton came here alive.

The amount of margarine imported cannot be distinguished in earlier years, but in 1891 the quantity imported (3,588,000*l.*) was nearly one-third of the quantity of butter—nine-tenths of the margarine coming from Holland. Denmark, with 876,000 cwts., valued at 4,866,000*l.*, continued to be by far the largest single contributor to our imports of butter in 1891. France and Sweden followed next in the magnitude of their supplies; 54,000 cwts. of butter were drawn from Australasian sources, 46,000 cwts. from Canada, and 64,000 cwts. from the United States.

France and Germany still furnish more than half the 1,275,398,000 eggs imported, Belgium, Russia, and Denmark coming next. The Canadian quota has increased from 2,000,000 to 33,000,000 in a single year.

Table V is a summary of agricultural produce statistics for wheat, barley, and oats, in Great Britain for the year 1892:—

TABLE V.—*Summary of Agricultural Produce Statistics in Great Britain for 1892.*

WHEAT.

	Estimated Total Produce.		Acreage.		Estimated Average Yield per Acre.	
	1892.	1891.	1892.	1891.	1892.	1891.
	Bshls.	Bshls.	Acres.	Acres.	Bshls.	Bshls.
England	55,107,186	68,694,456	2,102,969	2,192,393	26'20	31'33
Wales	1,318,763	1,461,740	55,278	61,590	23'86	23'73
Scotland	2,134,983	1,971,067	61,592	53,294	34'66	36'98
Great Britain..	58,560,932	72,127,263	2,219,839	2,307,277	26'38	31'26
BARLEY.						
England	59,527,968	60,900,824	1,709,587	1,772,432	34'82	34'36
Wales	3,350,862	3,438,620	114,520	117,101	29'26	29'36
Scotland	7,622,732	7,789,651	212,703	223,265	35'84	34'89
Great Britain..	70,501,562	72,129,095	2,036,810	2,112,798	34'61	34'14
OATS.						
England	73,266,495	69,786,175	1,765,463	1,672,835	41'50	41'72
Wales	7,976,830	7,698,529	233,399	234,055	34'18	32'89
Scotland	35,051,664	34,901,557	998,683	992,239	35'10	35'17
Great Britain..	116,294,989	112,386,261	2,997,545	2,899,129	38'80	38'77

Subject to the necessity of caution as to the strictly comparative character, in all instances, of the international returns, and accepting the data furnished, it may be useful to note that of the eleven countries which supply a statement, both of the acreage and of the yield of the wheat crop of 1891, the acreage so employed varies from close upon 40,000,000 acres in the United States, to not much over 2,000,000 acres in the United Kingdom. Russia has not supplied an official figure for the acreage of the year in question, but it is believed the growth of wheat in that Empire now covers an acreage somewhat under the 28,800,000 acres of 1883-87. The wheat area of India is given as 24,000,000 acres, a decline on the earlier figures. No other countries, except France and Italy, grow annually over 10,000,000 acres of wheat, and in 1891 the acreage under this cereal in the former country had shrunk, in consequence of the disastrous season experienced by French farmers, to little over 14,000,000 acres—a decline of as much as 3,000,000 acres below the normal average in a single year.

Some appreciation of the relative dimensions of the wheat crops grown in the year 1891 on the above areas, may be gathered

from noting that, reduced to imperial bushels, the United States are believed to have grown, in round numbers, 593,000,000 bushels, France, despite a reduced acreage and poor crop, 214,000,000 bushels, India over 200,000,000 bushels, Italy 137,000,000 bushels, Hungary 135,000,000 bushels, Germany somewhat under 86,000,000 bushels. The crop of the United Kingdom in 1891, although grown on just half the area employed by Germany for this purpose, came next in magnitude, yielding about 75,000,000 bushels.

Contrasts of average yield per acre in single seasons are always open to the varying influence of weather in particular districts; but it may be noted that working out the mean of the last recorded three years, 1889, 1890, and 1891, the yield of wheat in the United Kingdom stands at 30·6 bushels per acre, in contrast with 19·3 in Germany, 18·8 in Canada, 16·9 in France, 16·8 in Hungary, 14·4 in Austria, 13·4 in Roumania, and 12·7 in the United States, while wheat crops averaging only 12, 10, and 9 bushels per acre respectively are, it would seem, about the normal production in Italy, in our Australasian colonies, and in the wheat-growing provinces of India.

The tables which give in detail the agricultural production, consumption, and exports of wheat and maize in the United States have been supplemented, in the present returns, by statistics furnished by the American Department of Agriculture at Washington, exhibiting the total exports of agricultural produce from the United States to all countries during the years respectively ended on the 30th June, 1891 and 1892. Out of a total export trade exceeding in value 200,000,000*l.* in the last of those years, nearly four-fifths consisted of agricultural produce. Of this total of 160,000,000*l.*, a value of 60,000,000*l.* sterling is credited to grain and bread stuffs alone; wheat and wheat flour to the value of almost 48,000,000*l.* being included under this head. Cotton and cotton seed oil constitute one of the most characteristic of the several groups of agricultural exports from the United States, and although the figures are reduced in value from those of the preceding year, this item stood in 1891-92 little below the total of bread stuffs. The exports of animals and of animal matters from the United States appear to have exceeded a value of 36,000,000*l.* within the year.

III.—*Fires in London and the Metropolitan Fire Brigade in 1892.*

THE following particulars are taken from the Report of the Chief Officer, Mr. J. Sexton Simonds, to the Fire Brigade Committee of the London County Council, in continuation of similar notices for previous years:—

“The number of calls for fires, or supposed fires, received during the year has been 4,449. Of these 1,043 were false alarms, 260 proved to be only chimney alarms, and 3,146 were calls for fires, of which 177 resulted in serious damage, and 2,969 in slight damage.

“These figures only refer to calls which involved the turning out of firemen, fire engines, fire escapes, &c. They do not include ordinary calls for chimneys on fire, which are separately accounted for further on.

“The fires of 1892, compared with those of 1891, show an increase of 254; or compared with the average of the past ten years, an increase of 855.

“The following table gives the actual number of fires and percentages since the year 1866:—

Year.	Number of Fires.			Percentages.		
	Serious.	Slight.	Total.	Serious.	Slight.	Total.
1866.....	326	1,012	1,338	25	75	100
'67.....	245	1,152	1,397	18	82	100
'68.....	235	1,433	1,668	14	86	100
'69.....	199	1,373	1,572	13	87	100
'70.....	276	1,670	1,946	14	86	100
'71.....	207	1,635	1,842	11	89	100
'72.....	120	1,374	1,494	8	92	100
'73.....	166	1,382	1,548	11	89	100
'74.....	154	1,419	1,573	10	90	100
'75.....	163	1,366	1,529	11	89	100
'76.....	166	1,466	1,632	11	89	100
'77.....	159	1,374	1,533	10	90	100
'78.....	170	1,489	1,659	10	90	100
'79.....	159	1,559	1,718	9	91	100
'80.....	162	1,709	1,871	9	91	100
'81.....	167	1,824	1,991	8	92	100
'82.....	164	1,762	1,926	9	91	100
'83.....	184	1,960	2,144	9	91	100
'84.....	194	2,095	2,289	9	91	100
'85.....	160	2,110	2,270	7	93	100
'86.....	151	1,998	2,149	7	93	100
'87.....	175	2,188	2,363	7	93	100
'88.....	121	1,867	1,988	6	94	100
'89.....	153	2,185	2,338	7	93	100
'90.....	153	2,402	2,555	6	94	100
'91.....	193	2,699	2,892	7	93	100
'92.....	177	2,969	3,146	6	94	100

Average for Ten Years.

1882-91	165	2,126	2,291	7.2	92.8	100
'92.....	177	2,969	3,146	5.6	94.4	100

“The number of fires in the metropolis in which life has been seriously endangered during the year 1892 has been 100; and the number of these in which life has been lost has been 52.

“The number of persons whose lives have been seriously endangered by fire is 169; of these 105 were saved, and 64 lost their lives. Of the 64 lost, 40 were taken out alive, but died afterwards in hospitals or elsewhere, and 24 were suffocated or burned to death. The total number of persons whose lives have

been endangered must not be compared with previous years, as I do not now include in these numbers cases in which persons have been slightly burned on face or hands, or have received cuts from glass, &c.

* * * * *

“The number of calls for chimney fires has been 1,771. Of these 491 proved to be false alarms, and 1,280 were for chimneys on fire. In these cases there was no attendance of engines, but only of firemen with hand-pumps.

“The number of journeys made by the fire engines and hose vans of the brigade has been 34,350, and the total distance run has been 68,712 miles. These figures do not include hose carts and escapes, which are run by hand.

“The quantity of water used for extinguishing fires in the metropolis during the year has been nearly 31 million gallons, or about 137,200 tons. Of this quantity, considerably more than half was taken from the river, canals, and docks, and the remainder from the street pipes.

“During the year there have been 5 cases of short supply of water, and 3 of late attendance of turncocks, making 8 cases in which the water arrangements were unsatisfactory.

“As long as the supply of water is intermittent in some parts of the metropolis, difficulties must occasionally arise, but each year the area under constant service is increasing, and the cases in which the water arrangements are unsatisfactory show a proportionate decrease.

“The services rendered at fires by the metropolitan police, the city police, and the salvage corps have, as heretofore, been invaluable.

“The strength of the brigade is as follows:—

55 land fire engine stations.	13 hose and coal vans.
4 floating or river „	1 stores van.
52 hose cart stations.	5 waggons for street duties.
179 fire escape „	9 street stations.
9 steam fire engines on barges.	126 watch boxes.
48 land steam fire engines.	710 firemen, including chief officer,
78 six-inch manual fire engines.	superintendents, and all ranks.
17 under six-inch manual fire engines.	25 men under instruction.
34 miles of hose.	17 pilots.
105 hose carts and reels.	73 coachmen.
8 steam tugs.	133 horses.
13 barges.	74 telephones between fire stations.
12 skiffs.	55 alarm circuits round fire stations,
221 fire escapes.	with 546 call points.
9 long fire ladders.	21 telephones to police stations.
9 ladder vans.	2 telegraphs } to public and other
2 „ trucks.	73 telephones } buildings.
1 trolly for ladders.	8 bell-ringing fire alarms to public
2 trollies for engines.	and other buildings.

“The number of firemen employed on the several watches kept up throughout the metropolis is at present 125 by day and 325 by

night, making a total of 450 in every twenty-four hours; the average number of men available for general work at fires by night is 320.

“The number of accidents to members of the brigade recorded during 1892 is 95, of which 3 have, I regret to say, been fatal.

“There have been during the year 409 cases of ordinary illness, of which 3 resulted in death.

* * * * *

“The total number of calls during the year, including those for actual fires, supposed fires, chimney fires, and supposed chimney fires, has been 6,220, being an average of 17 a day, all of which have been attended by firemen with suitable appliances.

“Of the 1,043 false alarms received during the year, 497 have been malicious calls sent through the fire alarm call posts. These malicious alarms constitute a serious public danger, as they cause engines and escapes to be away from their stations at times when they may be required for actual fires. Unfortunately the persons who give the false alarms are very seldom detected in the act, there having been only 20 arrested during last year.

“The total number of attendances with engines at fires, or supposed fires, has been 11,657. This number includes the cases in which engines have been ordered to stand by without being sent on.

“In addition to attending fires, the brigade has kept 164,000 watches of twelve hours each, has made 51,506 hydrant inspections and 110,574 fire plug tablet inspections, has maintained all the machinery and appliances of the establishment in working order, written many thousand reports and letters, and carried on a variety of other work.

* * * * *

“The number of men who have been taken on and trained during the year is 88.”

* * * * *

The following particulars (*a*, *b*) are obtained from the tables appended to the report, viz.:—

(*a*) The fires classified according to occupations, arranged in the order of frequency of occurrence; to which are added, for the purpose of comparison, the corresponding figures for the three previous years:—

Number.	Occupations.	Number of Fires.			
		1892.	1891.	1890.	1889.
1	Private houses	749	718	632	580
2	Lodgings	547	451	428	361
3	Victuallers	68	82	57	70
4	Grocers	65	44	46	45
5	Farming stock	62	31	15	10

Number.	Occupations.	Number of Fires.			
		1892.	1891.	1890.	1889.
6	Oil and colourmen	53	36	43	44
7	Boot and shoe makers	51	47	38	42
8	Unoccupied.....	46	49	35	22
9	Offices	45	35	21	14
10	Under repair and building	44	33	37	35
11	Coffee houses	44	28	26	35
12	Tailors, clothiers, and outfitters	43	43	30	31
13	Builders	41	34	26	35
14	Stables	39	26	33	37
15	Greengrocers and fruiterers	38	45	27	18
16	Confectioners and pastrycooks.....	36	32	32	21
17	Bakers.....	34	34	35	30
18	Drapers	32	30	39	21
19	Printers	30	36	27	20
20	Chandlers	26	31	15	17
21	Railways.....	26	16	17	8
22	Hairdressers	25	10	9	14
23	Cabinet makers	24	32	21	23
24	Furniture makers and dealers	24	21	18	18
25	Beershop keepers	24	8	11	11
26	Butchers.....	23	15	14	16
27	Laundries	22	19	16	15
28	Tobacconists	20	29	25	25
29	Hotels (including club houses)	20	13	26	17
30	Booksellers, binders, and stationers.....	19	24	16	13
31	Milliners and dressmakers	19	15	18	14
32	Fishmongers	19	10	13	15
33	Fried fish shops.....	19	10	11	16
34	Warehouses	17	26	12	19
35	Dairymen	17	19	13	12
36	Refreshment rooms	16	18	16	20
37	Public buildings (not theatres)	15	18	10	13
38	Provision merchants	15	10	5	7
39	Engineers and machinists.....	14	34	24	19
40	Wholesale stationers.....	14	4	11	8
41	Chemists.	13	16	15	16
42	Waggons on road	13	7	6	4
43	Hatters	12	11	9	11
44	Let out in tenements	12	4	—	1
45	Carpenters and workers in wood.....	11	17	7	18
46	Carriers	11	10	6	2
47	Contractors	11	4	16	12
48	Upholsterers	11	9	11	7
49	Watch and clock makers	11	6	8	7
50	Corn dealers	10	19	12	17
51	Schools	10	11	11	6
52	Coal and coke merchants	10	7	10	7
	Remainder	526	555	496	439
		3,146	2,892	2,555	2,338

(b) The fires classified under the causes to which they have been assigned, and arranged in the order of frequency of occurrence:—

Causes.	Number of Fires.
1. Unknown and doubtful.....	987
2. Lamps (not gas) and lights thrown down	672
3. Sparks from fires, &c.	241
4. Gas in various ways	231
5. Defective (or improperly set) flues, hearths, stoves, &c.	204
6. Candles	175
7. Children playing with fire, matches, &c.	129
8. Hot ashes	108
9. Airing linen and drying stoves	84
10. Overheating of flues, ovens, furnaces, boilers, &c.....	71
11. Boiling over, or upsetting of fat, pitch, &c.	45
12. Foul flues, &c.	41
13. Lucifer matches.....	28
14. Gas stoves, portable, overheating of	23
15. Smoking tobacco	17
16. Lime slaking by rain and otherwise	13
17. Vapour of spirits in contact with flame	10
18. Fire, clothes coming in contact with	10
19. Friction of machinery, &c.	10
20. Fireworks	7
21. Spontaneous ignition.....	6
22. Burning rubbish	5
23. Fumigating	4
Miscellaneous, varying from 3 to 1.....	25
Total	<u>3,146</u>

IV.—*English Literature in 1892.*

THE following particulars are taken from the *Publishers' Circular* of the 7th January, 1893, in continuation of a series of similar extracts for previous years :—

“The table we now present to our readers shows, as compared with the return for 1891, an increase of between five and six hundred books published during the year. New editions are included in this estimate. A notable contribution to the added figures is the number of new novels and new editions of works of fiction. Among these, no doubt, are many works intended for young people. As for novels proper, we are inclined, in part, at any rate, to attribute their prodigious increase to the number of stories which are published serially in papers, periodicals and magazines. These become books later on.

“The most noticeable point about the figures of 1892 is, we think, that any increase in the number of books should be apparent, bearing in mind the wonderful development of periodical and newspaper literature, and the extent to which the attention of readers is necessarily diverted from less ephemeral literature.

Analytical Table of Books Published in 1892.

Subjects.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total of Books on each Subject for the Year
Theology, sermons, biblical	* 60 † 20	27 17	40 14	61 15	55 12	36 11	26 12	16 4	17 7	77 10	45 14	68 9	528 145
Educational, classi- cal, and philo- logical	* 47 † 7	67 11	51 17	54 17	67 6	34 5	36 6	40 3	44 8	72 19	24 8	43 8	579 115
Juvenile works and tales	* 29 † 4	1 5	3 3	10 3	16 —	11 1	6 5	2 2	41 5	94 15	53 7	26 3	292 53
Novels, tales, and other fiction	* 52 † 23	65 26	81 28	107 58	43 23	84 21	100 31	68 21	84 25	202 67	146 49	115 18	1,147 390
Law, jurisprudence, &c.	* 4 † 2	5 3	7 6	2 3	4 2	3 2	— 2	1 4	— 1	2 1	5 1	3 2	36 29
Political and social economy, trade and commerce	* 13 † 1	3 2	11 3	17 2	9 4	20 1	23 4	14 1	5 1	13 —	9 3	14 2	151 24
Arts, science, and illustrated works }	* 10 † 5	14 9	8 5	12 2	13 6	8 3	7 2	7 4	16 11	10 5	21 5	21 5	147 62
Voyages, travels, and geographical research.....	* 16 † 5	14 4	11 4	28 9	19 6	36 12	23 9	9 6	13 9	23 7	32 11	26 4	250 86
History, biography, &c.	* 24 † 7	19 1	28 10	21 7	33 10	22 4	25 5	8 3	13 6	35 9	31 7	34 6	293 75
Poetry and the drama	* 22 † 6	15 2	16 5	8 9	15 4	15 2	6 1	3 1	11 —	17 2	28 4	29 6	185 42
Year - books and serials in volumes }	* 62 † 3	25 —	26 1	16 —	25 3	18 1	26 1	16 —	14 —	34 —	42 —	56 4	360 13
Medicine, surgery, &c.	* 12 † 4	11 —	7 3	17 1	12 10	4 4	8 5	7 1	8 5	15 9	16 5	10 3	127 50
Belles-lettres, essays, monographs, &c. }	* 10 † 5	13 3	4 6	14 10	10 1	9 1	6 2	3 1	7 —	8 1	14 1	9 1	107 32
Miscellaneous, in- cluding pamphlets, not sermons.....	* 39 † 18	41 9	39 15	52 13	62 15	48 20	61 17	27 10	47 21	104 28	100 29	93 28	713 223
	510	412	452	568	485	436	455	282	419	879	710	646	

* New books.

† New editions.

“The analytical table is divided into fourteen classes; also new books and new editions.

Divisions.	1891.		1892.	
	New Books.	New Editions.	New Books.	New Editions.
Theology, sermons, biblical, &c.....	520	107	528	145
Educational, classical, and philological...	587	107	579	115
Juvenile works and tales.....	348	99	292	53
Novels, tales, and other fiction	896	320	1,147	390
Law, jurisprudence, &c.	61	48	36	29
Political and social economy, trade and commerce }	105	31	151	24
Arts, sciences, and illustrated works.....	85	31	147	62
Voyages, travels, geographical research ..	203	68	250	86
History, biography, &c.	328	85	293	75
Poetry and the drama.....	146	55	185	42
Year-books and serials in volumes	310	6	360	13
Medicine, surgery, &c.	120	55	127	50
Belles-lettres, essays, monographs, &c.	131	123	107	32
Miscellaneous, including pamphlets, } not sermons	589	142	713	223
	4,429	1,277	4,915	1,339
	5,706		6,254	

Newspaper Statistics.—The following is taken from the *Newspaper Press Directory* for 1893:—

“There are now published in the United Kingdom 2,268 newspapers, distributed as follows:—England—London, 459, provinces, 1,303—1,762; Wales, 102; Scotland, 214; Ireland, 166; isles, 24. Of these there are 146 daily papers published in England, 7 in Wales, 20 in Scotland, 17 in Ireland, 2 in British isles. On reference to the first edition of this directory for the year 1846 we find that in that year there were published in the United Kingdom 551 journals. Of these 14 were issued daily, viz., 12 in England and 2 in Ireland; but in 1893 there are now established and circulated 2,268 papers, of which 192 are issued daily, showing that the press of the country has more than quadrupled during the last forty-seven years. The increase in daily papers has been still more remarkable, the daily issues standing 192 against 14 in 1846. The magazines now in course of publication, including the quarterly reviews, number 1,961, of which more than 456 are of a decidedly religious character, representing the Church of England, Wesleyans, Methodists, Baptists, Independents, Roman Catholics, and other Christian communities.”

V.—Prize offered for an Essay on Demography.

WE have been requested by Dr. Brouardel, President of the International Committee of the Congress of Hygiene and Demography, to make the following announcement:—

Herr Joseph Körösi, Director of the Statistical Bureau of the Town of Buda-Pesth, has offered a prize of 1,500 frs. to be awarded to the author of the best essay on the object and progress of *Demography*. The author should particularise the scientific object of demography, and criticise the most important theories and the most important demographic works of the principal countries of Europe and the United States during the last fifty years. He will thus be required to bring out chiefly the development of censuses and the progress made in statistics of natality and mortality, and establish where, when, and by whom these branches of demographic science have been perfected.

The essay must be in German, English, French, or Italian. It must be sent, without any indication which could reveal the author's name, to Herr *Joseph Körösi*, at Buda-Pesth, before the 1st March, 1894. The author's name must be inserted in a sealed envelope, which must accompany the essay. The essays will be examined by the members of the committee mentioned below. In conformity with the decision of this committee, the prize will be awarded at the opening meeting of the Congress at Buda-Pesth, to the author of the work possessing the greatest intrinsic merit.

The examining committee is composed of the following members: *Dr. Jacques Bertillon*, Director of the Municipal Statistical Department of Paris; *Luigi Bodio*, General Director of Statistics of Italy, General Secretary of the International Statistical Institute; *Dr. V. von John*, Professor at the University of Innsbrück; *Joseph Körösi*, Director of the Statistical Bureau of the Town of Buda-Pesth; *Dr. W. Lewis*, Professor at Göttingen, Vice-President of the International Statistical Institute; *Dr. W. Ogle*, Superintendent of Statistics, General Register Office, London.

VI.—*Notes on Economical and Statistical Works.*

Finger Prints. By Francis Galton. London: Macmillan and Co., 1892.

In this book Mr. Galton has dealt with what would at first sight appear to be an unpromising subject. But he displays his accustomed skill in extracting from it information of interest and of scientific value. For the topic, with which he deals, is removed from the fanciful vaticinations of palmistry. The practisers of that seductive but ambiguous craft, which has lately attracted some amount of fashionable attention, ever on the alert for new or revived interest, devote their investigations to the creases and folds of the skin. But, Mr. Galton points out, these indicate alone the "lines of most frequent flexure," and it is to the less conspicuous marks or ridges that he directs his own inquiries. The minute and elaborate care, with which he has conducted these observations, and the cautious but suggestive character of the conclusions he has formed, will be familiar to all acquainted with his previous writings. He possesses the rare

faculty of pursuing with extraordinary zeal the most curious researches, and throughout he manifests the no less admirable, but more uncommon, quality of restraining the "scientific imagination" by a constant appeal to evidence. Nor are his researches destitute of practical advantage; for, as he shows, these ridges "have the unique merit of retaining their peculiarities unchanged throughout life, and afford in consequence an incomparably surer criterion of identity than any other bodily feature." They therefore have an intimate connection with those methods of criminal detection by means of anthropometrical records which are associated with the name of M. Bertillon, and are gradually coming into greater vogue. In fact by far the largest body of observations, on which Mr. Galton relies in this book, consist of those made in India by Sir William Herschel for such purposes of identification. "Finger prints were," Mr. Galton states, "taken of pensioners to prevent their personation by others after their death; they were used in the office for registration of deeds, and at a gaol where each prisoner had to sign with his finger." Such evidence indeed, as Mr. Galton is careful to add, with characteristic scrupulousness, may have an exaggerated value in the eyes of careless observers, and should be only used in conjunction with other evidence, and be judiciously interpreted. For the persistence of these finger patterns does not pertain to the proportions so much as to the detailed peculiarities. The proportions alter with the shape of the finger, while the "bifurcations, islands, and inclosures" in the ridges, which compose the pattern, remain unchanged. But there are difficulties of no mean order in classifying and indexing these varieties of pattern, and in making the preliminary observations; and the scientific value of Mr. Galton's book is due to the minute pains with which he examines and determines these points. He gives particulars, derived from experience, of the manner in which the impressions or prints of the finger tips, where these ridges exhibit the greatest variety and complexity, should be taken. And he classifies the patterns in the three broad divisions of arches, loops, and whorls. He supplies other methods of classification, and arrives at as many as nine distinct genera; and in this detailed work of classification, as in the examination of the precise evidential value of the finger prints, of the various relationships existing between the different digits and the two hands, and of the influence of heredity and of race and temperament, his book affords an admirable and instructive example of careful statistical inquiry. From this point of view alone, apart from its practical value it will reward the attentive study of the statistical student.

Bombay: 1885 to 1890. By Sir William Wilson Hunter. London: Henry Frowde, 1892.

Sir William Hunter has perhaps done more than any other writer to acquaint Englishmen with the accurate details of Indian phenomena. He has contrived to interest and to inform at the same time; and these two aims, so difficult to harmonise, and yet so essential to a full and correct understanding, are, we think, realised in the volume before us. Its scope is somewhat limited,

for it is but a single province and the administration of but one governor that are under discussion. And yet so great is the extent of our Indian dominions, and so varied are the races which inhabit the country, and complex and important the problems which are daily arising in connection with their government, that such a study as this presents us—in miniature it may be, but in a miniature which would seem magnificent in Europe—with a faithful reflection of the chief facts of Indian administration. In successive chapters Sir William Hunter lays before his readers the physical aspects of the Bombay Presidency, the political divisions of the country, the framework of the Government, the dealings with the Native States—themselves differing widely from one another, and therefore requiring widely different treatment—the question of education, to which Lord Reay—the Governor whose administration is reviewed—endeavoured to give a practical direction, the preservation of the forests, which had to be accomplished without unduly irritating native jealousy eager for the protection of supposed or legitimate rights, the administration of the land, in which Bombay presents differences—hitherto perhaps not sufficiently known in this country—from other parts of India, the public works, the finance, so adversely affected by the increased demands of the Central Government in consequence of the silver difficulty, the excise and general taxation, the protection of person and property, the local government, the military and the marine, and the questions connected with Sind, Aden, and the Portuguese possessions. On all these points Sir William Hunter furnishes reliable and interesting information; and he appears to have thoroughly succeeded in the aim, which he sets before him in his prefatory letter addressed to Miss Florence Nightingale, of writing a book “which would show the practical working of British administration in an Indian presidency.”

Studies in Secondary Education. Edited by Arthur H. D. Acland, M.P., and H. Llewellyn Smith. London: Percival and Co., 1892.

This book furnishes much useful information on a subject, which has of recent years attracted no little notice, and is yet in considerable need of careful authentic elucidation. Mr. Bryce in an introduction reviews the general position. He shows that, while education, both at the lower and the upper end of the scale, has undergone considerable improvement of recent years, the problem of intermediate or secondary education has never been fairly faced, and remains as the most unsatisfactory part of our educational system. But, as Mr. Smith points out in his survey of the problem, from the educational, as from the industrial side, attention has of late been concentrating, gradually but inevitably, on this particular question. Mr. Smith is followed by Mr. Benson, who traces the growth of our school system, and summarises the conclusions of the Schools Inquiry Commission. The second section of the book is devoted to the more immediate present, as the first is to past history. Like it it is designed to exhibit the actual state of the facts. A general sketch of recent progress in England is followed by an

account of the working of the Technical Instruction Acts in the agricultural county of Somerset, and of the Intermediate Education Act in Wales—a part of the country the more glaring needs of which have secured an earlier attention in the matter of reform—and, in the third and concluding portion of the book, detailed studies are supplied of particular typical towns in order to indicate the character of the needs which have to be met, and the merits and demerits of the existing provisions. Secondary education in London for boys and for girls, in Liverpool, in Birmingham, which apparently occupies a favoured position, and in Reading, forms the subject of these chapters; and the book ends with a concluding chapter, in which the deductions to be drawn from the several lines of investigation are collected together and the probable scope and direction of remedial reform are indicated.

Dictionary of Political Economy. By R. H. Inglis Palgrave. Parts 2—4. London: Macmillan and Co., 1892.

Mr. Palgrave continues to pursue with unremitting zeal the monumental task which he has set before him in this work. He has now passed through the press four parts of the Dictionary, and has come some way down the letter D. We have not detected in the three parts before us any falling off from the aims which were evident in the first. The range of subjects included within the scope of the Dictionary is as large, the number of the writers who have contributed has increased rather than diminished, and Mr. Palgrave's anxiety to intrust the several articles to those reputed for dealing with such special topics is open to little, if any, serious impeachment. On the other hand defects, which were necessarily obvious in the earliest portion of so large an undertaking, are, we think, less evident in the subsequent parts. The work produces the impression of having been brought more into hand, and the proportion of space allotted to the different topics seems more exactly suited to their proper requirements. We venture to offer our congratulations to Mr. Palgrave on what he has already achieved, and we look forward with interest to further instalments of this useful and memorable publication. Among the more important articles, from a statistical standpoint, which are contained in these parts now before us, may perhaps be mentioned, that by Professor Richmond Mayo Smith on the American Census; and among those of more general interest those on bimetallism, on charity organisation, and on co-operation.

The ABC of the Foreign Exchanges. By George Clare. London: Macmillan and Co., 1893.

The theory and practice of the foreign exchanges are among the most difficult of the topics handled in economic treatises. The number and complexity of the elements, which enter into the determination of the exchanges, are so great that it requires a clear head to see through the maze oneself, and considerable power of lucid explanation to communicate this saving knowledge to others. But Mr. Clare has already won his spurs in this department of inquiry by his admirable Primer of the Money Market, and he has,

we think, sustained his reputation in the useful and interesting volume now before us. The book has a distinctly "practical aim," and reproduces the substance of a course of lectures delivered before the Institute of Bankers. Beginning with the simple elements of the problem, Mr. Clare gradually introduces greater complexities, but he never loses his sureness of step, so far as we can detect, and he is thoroughly acquainted with the actual facts, with which he illustrates the working of the theory. He shows, for example, why it is that England draws few bills but accepts many; and he traces the course of the Paris, Berlin, and New York Exchange. It is by this constant reference to fact, and intimate connection with it, that he seems to us to succeed in realising his object of supplementing such classical productions as Mr. Goschen's book on the Foreign Exchanges.

The Theory of Wages. By Herbert M. Thompson. London: Macmillan and Co., 1892.

The theory of wages is a tempting subject. It is at once that part of economic theory which has been most frequently subjected to the demolition of critics and the reconstruction of succeeding workers, and it is also most closely akin to practical questions of the day. Mr. Thompson keeps this double reference continually before his eyes in this suggestive little volume. For he endeavours to set forth more clearly than had yet been done a satisfactory theory of wages, and he considers its immediate application to the eight hours' question. In setting forth his theory he criticises other theories, which he considers to conflict with the one that he adopts, such as the theory of the wages-fund, and the theory which treats any of the shares in the distribution of wealth as "residual," whether the share be that of wages or that of rent. On the wages-fund theory and the residual theory of wages Mr. Thompson's remarks appear to us to be characterised by clear insight and luminous statement, and his criticisms to be apt, even where they may not be original; but we do not think that his attack on the doctrine that rent does not enter into the cost of production is free from ambiguity or a shifting use of terms. His general contention that wages are a varying proportion of a varying product of industry is in accord, as he is disposed to allow, with the general results of recent speculation, and is stated with clearness and conciseness. The drift of his concluding and practical chapter appears to be unexceptionable, but the use of actual numbers is perhaps not freed from danger of unconsidered applications even by the safeguards which he provides.

A Review of the Effect of Low Exchange on the Export Trade of India. By F. Atkinson. Allahabad: Pioneer Press, 1892.

In this pamphlet Mr. Atkinson, who belongs to the Indian Financial Department, endeavours to bring to the test of figures a contention which has played a prominent part in recent currency discussions. He attempts to discover whether the admitted increase in the exports of India is due to the stimulus of a continually falling exchange, or "whether any other factors have

played a more important part in bringing about the result." If the effect imagined had taken place, he argues, it would have resulted from, or resulted in, some or all of certain conditions, such as a rise in silver prices, an increase in the area under cultivation in excess of the increase of population in silver-standard countries, a check to the imports of merchandise, and an increase in the import of treasure, an increased profit to the exporter, and a greater growth in the export trade than in that of gold-standard countries. He then proceeds to test these various points by figures, and arrives at the conclusion that, except the increase in the imports of Council bills, which has been a direct disadvantage to India, none of the conditions, which should have been expected, have arisen. In the next section he traces the history of the export trade from India—its quantity, value, prices—in detail, and reaches the result that, of all the commodities which India exports, cotton, and perhaps coffee, are the only two which enter into any real competition with commodities exported by gold-standard countries. In the following section he investigates the actual causes which have stimulated the export trade, and these he enumerates as extension of railways, reduction in railway and sea freights, the opening of the Suez Canal, the construction of roads and improvements in the methods of carriage, the extension of irrigation, of telegraphs, of banking and of credit, of business methods and the whole apparatus of civilisation and British enterprise. He then in a final section considers the varying advantages of different schemes of currency reforms, according as they contemplate a change in the currencies of the world or of India only.

Die Mittlere Lebensdauer. Von Ladislaus von Bortkewitsch. Jena: Gustav Fischer, 1893.

In this monograph, Dr. Bortkewitsch reviews some of the main problems connected with the determination of mortality statistics. In the first of the two chapters, into which the work is divided, he considers the questions which arise in connection with the measurement of rates of mortality, and in the second and concluding chapter he turns his attention to the relations between the mean duration of life, the average age at death, and the figures of mortality and of births. The treatment pursued is largely mathematical, and is characteristically thorough. The author is acquainted with the nature of the researches pursued, and the results attained, by previous workers in the same field of inquiry, and he discusses with minuteness the various points which arise in the course of the inquiry. His monograph will recommend itself to the attention of all who are interested in such studies, and forms a suitable addition to a useful series, some volumes of which have been noticed in this Journal on former occasions.

The Case against Bimetallism. By Robert Giffen, LL.D. London: George Bell and Sons, 1892.

A reprint of papers on bimetallism contributed by Dr. Giffen to various newspapers and magazines since 1879. With the exception of the first two (dated 1879 and 1886) they were all

written in 1889 and 1890, and are arranged, as far as possible, in chronological sequence. There is consequently more connection between the different articles than is often the case in a collection of this kind. The first, and earliest, paper deals with the "General Case against Bimetallism," and it is followed by others on "Some Bimetallic Fallacies" (including the "Functions of Government in Respect of Standard Money," "Ratio between Gold and Silver," and "Bimetallism and the Fall in Prices"), "A Problem in Money" ("In what way is the Ratio of Exchange fixed between the Precious Metals and other Commodities?"), "The Inevitable Results of Universal Bimetallism," "M. de Laveleye on Mint Price," "The Alleged Bimetallism of France, 1803-73," "Unsaleable Silver," "The American Silver Bubble," and finally "A Chapter on Standard Money." From this it will be seen that Dr. Giffen discusses all the more important problems and financial experiments which have lately come into prominence. There are also two appendices: the first is a table showing the premium on gold in France, from 1820 to 1847, and the other consists of extracts from Debates in the House of Commons on Bimetallism, in 1830. The general scope of the work is summed up by the author himself in the following words: "Generally, the connecting threads of these essays are, first, in the earlier essays, an attempt to exhibit the extravagance and intemperance of idea among bimetallicists regarding money and currency, this extravagance and intemperance being characteristic of the currency faddist; and next, in the later essays, an attempt to explain and support the main propositions of the adherents of a monometallic standard, as the only sound foundation of a monetary system."

Life and Labour of the People. Edited by Charles Booth. 4 vols. London: Macmillan and Co., 1892-93.

Mr. Booth, in issuing these four volumes in a cheaper form, has brought the results of his laborious inquiry into the condition of the people of London within reach of a much larger portion of the community than could obtain his former work. The matter contained in them is practically identical with that of the first two volumes of *Labour and Life of the People in London* (the last two volumes of which are still to be published), the only change being the rearrangement of the text, and, in some cases, a few notes added to the original articles—particularly those dealing with the trades—explaining any changes that may have occurred since the book was first issued. As before, the large coloured maps of London are published under a separate cover. The book having been noticed at length on the appearance of the first two volumes (*Journal*, vol. lii, 1889, page 349; and vol. liv, 1891, page 542), it is not necessary now to do more than note the order in which the various articles are presented. The first volume is divided into three parts: east, central and south and outlying London, and is principally descriptive; the second deals with "London, Street by Street"; volume iii contains the "Special Subjects" and also the "London Children," while

volume iv embraces the "Trades of East London." There are also two new appendices: one in volume ii on the Classification and Description of the Population of London by School Board blocks and divisions, and the other—forming a supplement to the article on Immigration—in volume iii, showing the birth-places of persons born in other counties of the United Kingdom or abroad living in the different registration districts and sub-districts of London in 1881.

The Statesman's Year-Book. Edited by J. Scott Keltie. London: Macmillan and Co., 1893.

The principal changes in Mr. Keltie's most valuable work of reference this year are in the preliminary tables relating to the whole world, which form an interesting and useful introduction to the portions dealing with each country separately. The new tables are "The Great Cities of the World" (showing the population of all towns containing more than 100,000 inhabitants), "The Wheat Crops of the World," "The World's Production of Gold and Silver in 1891" (from the report of the Director of the United States Mint), "The Merchant Marine of the Principal Countries of the World, 1891-92," and "The Trade of Africa in 1891." The map of the Pamirs in last year's issue is repeated, and a large map of Africa, south of the equator, is also given, showing the treaties according to which the various boundary lines have been drawn.

Lombard Street. By Walter Bagehot. London: Kegan Paul and Co., 1892.

This is a new edition in which the original text of Walter Bagehot has been left unaltered, the only additions made being in the shape of footnotes, by Mr. E. Johnstone, bringing the figures up to date, or noting any changes which have occurred since the book was first published.

Statistical and Economical Articles in Recent Periodicals.

AUSTRIA—

Statistische Monatschrift—

January, 1893—

Die Ergebnisse der Erbschaftssteuer in Oesterreich in 1889-91; und ihre Bedeutung für die Schätzung des Nationalvermögens: *C. T. v. Inama-Sternegg.*

Ernteergebniss der wichtigsten Körnerfrüchte im Jahre 1892: *A. Freiherr v. Hohenbruck.*

Daten zur Statistik des österreichischen Civilstaatsdienstes: *Friedenfels.*

Studentenstiftungen in Oesterreich im Jahre 1891: *Bratassevic.*

Die Reform der landwirthschaftlichen Statistik im Deutschen Reiche.

FRANCE—

Journal des Economistes—

December, 1892—

La Conférence monétaire de Bruxelles: *G. de Molinari.*L'Enseignement de l'Economie Politique en France: *Chailley-Bert.*Les Impôts arabes en Algérie (fin): *A. Bochart.*La Persécution légale des Juifs en Russie: *L. Dornanski.*Mouvement scientifique et industriel: *D. Bellet.*La Production de l'Or en Australie et dans l'Afrique méridionale: *A. Raffalovich.*La suppression des Bureaux d'Enregistrement (2^e article): *J. C. Henricet.*

January, 1893—

1892: *G. de Molinari.*Le Marché financier en 1892: *A. Raffalovich.*De la Société moderne d'après la récente publication de M. Herbert Spencer: *E. Lamé-Fleury.*Les Instituts de Banquiers: *G. François.*Souvenir de Russie. Excursions aux mines d'or de la Mandchourie: *Dr. Meyners d'Estrey.*

February—

Faut-il poursuivre ou abandonner l'entreprise du Canal de Panama: *G. de Molinari.*Considérations sur l'Economie rurale de la Russie: *Inostranietz.*L'Agriculture d'Etat: *E. Ratoïn.*Le mouvement agricole: *G. Fouquet.*Les retards de la statistique criminelle: *H. Joly.**Journal de la Société de Statistique de Paris—*

December, 1892—

Quelques mots sur la population scolaire: *E. Levasseur.*Le calcul du taux de nuptialité et de fécondité: *F. Noquès.*Les effets de commerce et l'escompte en France depuis 10 ans: *P. des Essars.*

Rapport au Garde des Sceaux sur l'application de la loi du 26 Mars 1891, relative à l'atténuation des peines.

La population de Paris et du département de la Seine d'après le dénombrement de 1891: *T. Loua.*Statistique des aliénés du Royaume-Uni de Grande Bretagne et d'Irlande pour 1890: *V. Miquel.*Tableaux relatifs à l'Exportation et à l'Importation de 1886 à 1891 (Turquie): *Vital-Cuinet.*

January, 1893—

L'Europe: *E. Levasseur.*Observations sur l'organisation de l'enseignement de la statistique: *F. Faure.*

February—

Le mouvement de la Population en France pendant 1891 (Rapport au Ministre du Commerce et de l'Industrie).

Statistique des épidémies de grippe de 1890 et 1892 en France: *V. Turquan.*

FRANCE—*Contd.*

Revue d'Economie Politique—

December, 1892—

Les décrets sur la journée de travail en 1848: *V. Mataja.*

Des sociétés coopératives en Italie autres que les sociétés de crédit: *L. Sbrojavacca.*

Le congrès national d'Anvers sur la législation douanière et la réglementation du travail: *E. van Elewyck.*

L'impôt direct général basé sur le capital et le revenu capitalisé: *N. C. Frederiksen.*

La situation des ouvriers en Russie: *G. Dubreuil.*

January, 1893—

Le mouvement coopératif en France dans les dix dernières années: *C. Gide.*

Le Billet de Banque international: *G. François.*

February—

Un projet de Traité de commerce avec l'Angleterre sous le Consulat: *M. Chaptal.*

La séparation des pouvoirs et l'assemblée nationale de 1789: *L. Duguit.*

La Propriété et le Collectivisme au xviii^e Congrès ouvrier italien de Palerme: *H. Santangelo-Spoto.*

GERMANY—

Archiv für Soziale Gesetzgebung und Statistik—

Band v, Heft 4—

Die preussischen Steuervorlagen vom Standpunkt der Sozialpolitik: *Dr. J. Jastrow.*

Die Reform des Arbeiterschutzes beim preussischen Bergbau: *Dr. L. Verkauf.*

Der Entwurf eines Auswanderungsgesetzes: *Dr. E. v. Philippovich.*

Wortlaut des Entwurfs eines Gesetzes über das Auswanderungswesen.

Wortlaut des Gesetzes betr. die Abänderung einzelner Bestimmungen des Allgemeinen Berggesetzes vom 24 Juni 1865.

Die Statistik der Unfall- und Krankenversicherung im Deutschen Reich für das Jahr 1890: *Dr. E. Lange.*

Jahrbücher für Nationalökonomie und Statistik—

Band iv, Heft 6—

Beiträge zur Lehre von den auswärtigen Wechselkursen: *C. Heiligenstadt.*

Kapitalszins und Arbeitslohn: *K. Wicksell.*

Die zweite Lesung des Entwurfs eines Bürgerlichen Gesetzbuches für das Deutsche Reich (Fortsetzung): *Assessor Greiff.*

Die wirthschaftliche Gesetzgebung Italiens im Jahre 1891: *C. F. Ferraris.*

Statistik der Strafanstalten in Ungarn.

Leistungen der Bibliotheken: *E. Reyer.*

GERMANY—*Contd.**Jahrbücher für Nationalökonomie und Statistik—Contd.**Band v, Heft 1—*

Die landwirthschaftliche Brennerei in Deutschland unter der Wirkung des Branntweinsteuergesetzes vom 24 Juni 1887: *P. Wittelschöfer.*

Die wahre Beschaffenheit der Versicherung in der Entstehungszeit des Versicherungswesens: *A. Schaub.*

Die zweite Lesung des Entwurfes eines Bürgerlichen Gesetzbuches für das Deutsche Reich: *Greiff.*

Ueber die Stellung der dänischen Gesetzgebung zur Unterstützung der Unbemittelten, welche nicht unter dem Armenwesen stehen: *Cordt Trap.*

Das Pfandvorrecht der Bauhandwerker: *P. Oertmann.*

Die Preise des Jahres 1891 verglichen mit den Vorjahren.

Band v, Heft 2—

Die Lage der arbeitenden Klassen in den Hauptkulturländern: *E. R. Gould.*

Beiträge zur Lehre von den auswärtigen Wechselkursen: *C. Heiligenstadt.*

Die zweite Lesung des Entwurfes eines Bürgerlichen Gesetzbuches für das Deutsche Reich (Fortsetzung): *Greiff.*

Das Pfandvorrecht der Bauhandwerker (Fortsetzung): *P. Oertmann.*

Die Aussichten der Juristen in Preussen: *F. Werner.*

Die Schwankungen des Diskont und des Silberpreises im Jahre 1892 und der Vorjahre.

*Vierteljahrschrift für Volkswirtschaft, Politik, und Kulturgeschichte.**Band i—*

Über Ertragssteuern: *Dr. J. Jastrow.*

“Beschäftigungsort” im Sinne des Krankenversicherungsgesetzes vom 15 Juni 1883 bzw. 10 April 1892: *Dr. B. Hilse.*

Mittelalterliches und modernes Bürgertum: *C. Meyer.*

Die Reformation und der deutsche Bürgerstand: *C. Meyer.*

Der Entwurf eines neuen Gesetzes betreffend den Markenschutz: *Dr. G. Lewinstein.*

Otto Wolff. Ein Nekrolog von dem Herausgeber.

Industrielle und statistische Verhältnisse des Staates Hidalgo der Republik Mexico: *E. Ordoñez.*

Die Novelle zum Wuchergesetz: *Dr. G. Lewinstein.*

*Vierteljahrshefte zur Statistik des Deutschen Reichs—**Heft 1, 1893—*

Nachweis der Bestimmungen für die gemeinsame Statistik des Deutschen Reichs.

Grosshandels - Preise wichtiger Waaren an deutschen Plätzen im Jahre 1892 und in 1879-92.

Die Erzeugung von Zink, Blei, Kupfer, Silber und Gold im Deutschen Reich während 1872-91.

Die deutsche Seeschifffahrt im Jahre 1891.

GERMANY—*Contd.*

Vierteljahrshefte zur Statistik des Deutschen Reichs—Contd.

Heft 1, 1893—Contd.

Alter und Familienstand der Bevölkerung des Deutschen Reichs am 1. Dez. 1890.

Die Eheschliessungen, Geburten und Sterbefälle im Deutschen Reich im Jahre 1891.

Die überseeische Auswanderung im Jahre 1892.

Der Taback im deutschen Zollgebiet. Besteuerung des Tabacks, Ein- und Ausfuhr von Taback und Tabackfabrikaten, sowie Ertrag der Tabackabgaben im Erntejahre 1891-92.

ITALY—

Giornale degli Economisti—

January—

Considerazioni sui principii fondamentali dell' economia politica pura: *V. Pareto.*

La pressione tributaria dell' imposta e del prestito: *A de Viti de Marco.*

L'economia politica al Consiglio comunale di Milano: *A. Laria.* Previdenza: *C. Bottoni.*

February—

La quistione delle Banche d' emissione: *La Direzione.*

La Campagna romana e il suo avvenire economico e sociale: *G. Valenti.*

Le condizioni economico-sociali dei lavoratori in Inghilterra: *V. Meneghelli.*

Di un facile errore a proposito della computazione degli interessi del debito pubblico: *F. Colletti.* Per una classificazione: *A. Graziani.*

SWITZERLAND—

Journal de Statistique Suisse—

4^e Livr., 1892—

Orientirendes über die Alkoholfrage in der Schweiz: *W. Milliet.*

Die Todesfälle in Folge von Lungenschwindsucht in der Schweiz während der Jahre 1886-90.

Die kantonalen Polizeikorps im Jahre 1892.

Nombre des étudiants et auditeurs des universités et académies suisses pendant l'été 1892.

UNITED STATES—

Annals of the American Academy of Political and Social Science.

Vol. iii, No. 4. January, 1893—

Local Government of Country Communities in Prussia: *C. Bornhak.*

Cost and Utility: *S. N. Patten.*

Alcohol question in Switzerland: *W. Milliet.*

Seligman's Shifting and Incidence of Taxation: *E. A. Ross.*

UNITED STATES—*Contd.*

Annals of the American Academy of Political and Social Science.

Vol. iii, No. 4. January, 1893—Contd.

Psychologic basis of Social Economics: *L. F. Ward.*

Theory of final utility in relation to standard of deferred payments: *L. S. Merriam.*

Journal of Political Economy. Vol. i, No. 1, December, 1892—

This is a new quarterly, edited by the Department of Political Economy in the University of Chicago. The first number contains:

Study of Political Economy in the United States: *J. L. Laughlin.*

Recent Commercial Policy of France: *E. Levasseur.*

Rodbertus's Socialism: *E. B. Andrews.*

Price of Wheat since 1867: *T. B. Veblen.*

Adolph Wagner's New Treatise.

Veto of the Inflation Bill of 1874: *E. Atkinson.*

Political Science Quarterly. Vol. vii, No. 4, December, 1892—

A New Canon of Taxation: *Professor E. A. Ross.*

Railway Accounting: *T. L. Greene.*

The Origin of Written Constitutions: *C. Borgeaud.*

The Commercial Policy of Europe: *W. Z. Ripley.*

Early History of the Coroner: *Professor C. Gross.*

The Russian Judiciary: *I. A. Hourwich.*

Quarterly Journal of Economics. Vol. vii, No. 2, January, 1893—

On the Study of Economic History: *W. J. Ashley.*

French Catholics and the Social Question: *C. Jannet.*

Recent Literature on Protection: *F. W. Taussig.*

Some Explanations relating to the "Theory of Dynamic Economics:" *S. N. Patten.*

Social and Economic Legislation of the States in 1892: *W. B. Shaw.*

South American Trade: *F. R. Clow.*

UNITED KINGDOM—

Economic Journal. Vol. ii, No. 8. December, 1892—

London Waterside Labour: *H. Ll. Smith.*

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Government Railways in a Democratic State: *W. M. Acworth.*

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The Economic Review. Vol. iii, No. 1. January, 1893—

The Christian Social Union: *The Bishop of Durham and the Rev. H. M. Butler.*

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VII.—Additions to the Library.

Additions to the Library during the Quarter ended 15th March, 1893, arranged alphabetically under the following heads:—(a) Foreign Countries; (b) India and Colonial Possessions; (c) United Kingdom and its Divisions; (d) Authors, &c.; (e) Societies, &c. (British); (f) Periodicals, &c. (British).

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Higiene Publica. Anales de. (Current monthly numbers) BUENOS AYRES (City). Bulletin mensuel de Statistique municipale. (Current numbers)	
Instituto Geografico Argentino. Boletin del. Tomo xiii. Cuadernos 1—6. Svo. 1892.....	The Institute
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Sparcassen, Statistik der, für das Jahr 1890. Fol.	
Statistische Monatschrift. (Current numbers)	The Central Statistical Commission
HUNGARY. Statistisches Jahrbuch für Ungarn. Hefte 1—9 of 1874. Tables of Contents of 1881 and 1888. Heft 10 of 1889, Heft 4 of 1890. Svo.	The Royal Hungarian Statistical Bureau
CRACOW. Statistique de la ville de Cracovie. Livr. 3. Svo. 1892	
PRAGUE. Bulletin hebdomadaire de la ville de Prague et des communes-faubourgs. (Current numbers)	Sir R. W. Rawson, K.C.M.G., C.B. The Statistical Bureau
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La Statistique de l'Enseignement Primaire. 125 pp., 4to. Rome, 1892	
<i>Mathieson (F. C.) and Sons</i> —	
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VIII.—PERIODICAL RETURNS.

REGISTRATION OF THE UNITED KINGDOM.

No. I.—ENGLAND AND WALES.

MARRIAGES—To 30TH SEPTEMBER, 1892.

BIRTHS AND DEATHS—To 31ST DECEMBER, 1892.

A.—*Serial Table of MARRIAGES, BIRTHS, and DEATHS, returned in the Years 1892-86, and in the QUARTERS of those Years.*

Calendar YEARS, 1892-86 :—Numbers.

Years	'92.	'91.	'90.	'89.	'88.	'87.	'86.
Marriages No.	—	226,526	223,028	213,865	203,821	200,518	196,071
Births..... „	897,270	914,157	869,937	885,944	879,868	886,331	903,760
Deaths „	559,090	587,925	562,248	518,353	510,971	530,758	537,276

QUARTERS of each Calendar Year, 1892-86.

(I.) MARRIAGES :—Numbers.

<i>Qrs. ended last day of</i>	'92.	'91.	'90.	'89.	'88.	'87.	'86.
March..... No.	42,788	49,203	40,905	41,006	40,276	38,836	39,202
June „	59,864	52,678	59,180	55,741	51,684	52,637	50,325
September „	58,235	58,651	57,143	53,820	51,603	49,746	48,565
December „	—	65,994	65,800	63,298	60,258	59,299	57,979

(II.) BIRTHS :—Numbers.

<i>Qrs. ended last day of</i>	'92.	'91.	'90.	'89.	'88.	'87.	'86.
March..... No.	219,851	229,133	225,640	220,296	223,766	219,162	230,330
June „	232,385	239,480	220,060	227,641	224,112	226,338	231,087
September „	228,254	224,580	220,769	220,341	214,651	222,835	224,332
December „	216,780	220,964	203,468	217,666	217,339	217,996	218,011

(III.) DEATHS :—Numbers.

<i>Qrs. ended last day of</i>	'92.	'91.	'90.	'89.	'88.	'87.	'86.
March..... No.	182,482	157,987	165,318	139,344	149,976	143,123	156,653
June „	131,991	171,842	128,625	124,434	124,918	128,488	125,359
September „	115,733	116,690	122,515	122,362	107,881	125,232	125,366
December „	128,884	141,406	145,790	132,213	128,196	133,915	129,898

*Annual Rates of MARRIAGES, BIRTHS, and DEATHS, per 1,000 PERSONS
LIVING in the Years 1892-86, and in the QUARTERS of those Years.*

Calendar YEARS, 1892-86:—General Ratios.

YEARS.....	'92.	Mean '82-91.	'91.	'90.	'89.	'88.	'87.	'86.
Estmtd. Popln. of England in thousands in middle of each Year....	29,403,	—	29,081,	28,762,	28,447,	28,135,	27,827,	27,522,
Persons Mar- ried	—	15'0	15'6	15'5	15'0	14'4	14'4	14'2
Births	30'5	32'2	31'4	30'2	31'1	31'2	31'9	32'8
Deaths.....	19'0	19'3	20'2	19'5	18'2	18'1	19'1	19'5

QUARTERS of each Calendar Year, 1892-86.

(I.) PERSONS MARRIED:—Ratio per 1,000.

<i>Qrs. ended last day of</i>	'92.	Mean '82-91.	'91.	'90.	'89.	'88.	'87.	'86.
March	11'7	12'1	13'7	11'5	11'7	11'5	11'3	11'6
June.....	16'3	15'3	14'5	16'5	15'7	14'7	15'2	14'7
September	15'7	15'0	16'0	15'8	15'0	14'6	14'2	14'0
December	—	17'5	18'0	18'2	17'7	17'0	16'9	16'7

(II.) BIRTHS:—Ratio per 1,000.

<i>Qrs. ended last day of</i>	'92.	Mean '82-91.	'91.	'90.	'89.	'88.	'87.	'86.
March	30'0	33'1	32'0	31'8	31'4	31'9	31'9	33'9
June.....	31'7	33'0	33'0	30'7	32'1	31'9	32'6	33'7
September	30'8	31'7	30'6	30'5	30'7	30'3	31'8	32'3
December	29'3	31'2	30'1	28'1	30'4	30'6	31'1	31'4

(III.) DEATHS:—Ratio per 1,000.

<i>Qrs. ended last day of</i>	'92.	Mean '82-91.	'91.	'90.	'89.	'88.	'87.	'86.
March	24'9	21'6	22'0	23'3	19'9	21'4	20'9	23'1
June.....	18'0	19'2	23'7	17'9	17'5	17'8	18'5	18'3
September	15'6	17'2	15'9	16'9	17'1	15'2	17'9	18'1
December	17'4	19'2	19'3	20'1	18'4	18'1	19'1	18'7

B.—Comparative Table of CONSOLS, PROVISIONS, COAL and PAUPERISM in each QUARTER of 1890-91-92.

Quarters ending	Average Prices of						PAUPERISM.	
	2¾l. per Cent. CONSOLS (for Money) per 100l. Stock.	DISCOUNT charged by the Bank of England.	WHEAT per Quarter in England and Wales.	MEAT per Pound at the Metropolitan Meat Market (by the Carcase), with the Mean Prices.		COAL (Seaborne) in the London Market per Ton.	Quarterly Average of the Number of Paupers Relieved on the Last Day of each Week.	
				Beef.	Mutton.		In-door.	Out-door.
1890	£ s. d.	£	s. d.	d. d. d.	d. d. d.	s. d.		
Mar. 31	97 4 9	5'34	29 10	3½—7½ 5½	6½—10¾ 8½	19 4	192,316	533,577
June 30	97 15 9	3'19	32 8	3½—7½ 5½	6½—9¼ 7½	17 9	172,686	506,303
Sept. 30	96 - -	4'30	34 4	3½—7½ 5½	6½—9½ 8	18 8	165,091	493,107
Dec. 31	94 19 4	5'29	31 10	3½—7½ 5½	7—9½ 8½	19 3	178,858	492,131
1891								
Mar. 31	96 16 6	3'35	32 11	3½—7¼ 5½	6½—8½ 7¾	19 5	186,337	514,189
June 30	95 10 5	3'80	39 6	4¼—7½ 5½	5½—8½ 7	18 2	172,510	490,721
Sept. 30	95 10 11	2'54	38 11	4¼—7¾ 6	5¼—8½ 7½	18 8	164,799	474,575
Dec. 31	95 0 8	3'57	36 8	4½—7½ 6	5¼—8½ 7½	18 1	179,495	474,350
1892								
Mar. 31	95 14 10	3'12	33 8	4½—7½ 5½	6—8½ 7½	19 -	190,747	505,021
June 30	96 16 8	2'18	30 11	4½—6¾ 5¾	6—8½ 7¼	17 2	174,015	494,284
Sept. 30	96 18 10	2'00	29 3	4½—7¼ 6	5½—8¼ 6¾	17 7	169,149	471,058
Dec. 31	97 3 7	2'79	27 5	3½—7½ 5½	5—8½ 6½	16 7	—	—

C.—Special Average Death-Rate Table:—ANNUAL RATE of MORTALITY per 1,000 in TOWN and COUNTRY DISTRICTS of ENGLAND in each Quarter of the Years 1890-92.

	Area in Statute Acres.	Population Estimated in the middle of 1892.	Quarters ending	Annual Rate of Mortality per 1,000 in each Quarter of the Years			
				1892.	Mean '82-91.	1891.	1890.
TOWN DISTRICTS.							
All Registration Sub-Districts three-fourths of the population of which, as enumerated in 1881, resided within the boundaries of Urban Sanitary Districts existing in 1886	3,710,241	18,931,070	March ..	24·6	22·4	22·8	24·4
			June	18·5	19·9	24·7	18·7
			Sept.	16·6	18·6	16·8	18·5
			Dec.	18·3	20·5	20·3	22·0
			Year	19·5	20·4	21·1	20·9
COUNTRY DISTRICTS. All the remaining Registration Sub-Districts of England and Wales—not coming within the above definition of Town Districts	33,529,110	10,472,276	Year	18·1	17·5	18·5	17·4
			March ..	25·5	20·3	20·7	21·7
			June	17·2	17·9	21·7	16·5
			Sept.	13·9	14·8	14·2	14·1
			Dec.	15·8	17·0	17·6	17·4

D.—*Special Town Table*.—POPULATION ; BIRTH-RATE and DEATH-RATE in each Quarter of 1892, in THIRTY-THREE Large Towns.

Cities and Boroughs.	Estimated Population in the Middle of the Year 1892.	Annual Rate to 1,000 Living during the Thirteen Weeks ending							
		2nd April. (1st Quarter.)		2nd July. (2nd Quarter.)		1st October. (3rd Quarter.)		31st December (4th Quarter.)	
		Births.	Deaths.	Births.	Deaths.	Births.	Deaths.	Births.	Deaths.
Thirty-three towns	10,188,449	31·6	25·8	32·9	19·5	32·1	17·9	31·0	19·4
London*	4,263,294	31·6	28·2	31·4	18·9	31·0	17·1	29·7	18·5
West Ham	217,113	39·1	22·4	37·9	15·6	35·9	18·6	35·1	17·8
Croydon	106,152	25·1	22·3	28·1	13·1	27·8	12·6	25·0	15·2
Brighton	116,424	26·5	26·6	26·8	14·0	24·1	15·0	24·5	21·4
Portsmouth	163,667	27·9	28·1	29·2	14·6	28·9	15·4	26·1	15·9
Plymouth	85,610	29·2	21·8	30·0	17·8	28·4	16·4	28·6	19·2
Bristol	223,592	30·1	23·6	30·6	20·5	28·4	16·1	29·2	17·6
Cardiff	136,181	34·7	22·9	36·8	17·1	35·6	17·3	34·0	18·0
Swansea	92,344	36·5	27·9	35·9	18·3	33·7	16·4	34·5	19·0
Wolverhampton	83,519	31·8	29·3	34·5	20·7	34·6	17·1	33·8	19·0
Birmingham	483,526	33·6	21·8	34·2	21·3	32·0	18·4	33·5	20·2
Norwich	102,736	29·4	28·6	31·7	17·3	31·0	16·0	29·9	18·2
Leicester	180,066	30·3	19·6	34·9	19·5	32·8	17·0	30·7	16·5
Nottingham	215,395	27·5	23·6	31·3	16·7	29·9	15·3	28·8	19·3
Derby	95,908	28·4	22·4	31·9	18·8	33·4	17·1	30·9	15·0
Birkenhead	101,264	31·3	23·9	35·7	18·3	34·1	17·7	32·7	18·5
Liverpool	513,790	34·4	30·8	35·7	23·7	35·0	22·3	33·5	22·2
Bolton	116,261	32·4	24·7	33·7	20·8	32·8	21·3	32·0	24·4
Manchester	510,998	31·8	26·1	35·7	24·6	34·8	20·3	32·6	24·1
Salford	201,058	36·4	24·9	36·9	22·6	35·7	23·2	34·4	27·8
Oldham	134,221	28·1	26·2	30·6	22·7	28·4	17·5	29·3	21·6
Burnley	90,589	33·8	25·1	34·5	20·3	36·8	17·4	31·7	18·7
Blackburn	122,238	32·1	25·8	31·5	20·2	32·6	19·4	31·4	21·3
Preston	109,038	35·2	27·1	34·6	22·0	34·1	24·3	33·1	23·0
Huddersfield	96,599	20·8	21·5	22·2	18·7	25·7	14·8	23·3	17·2
Halifax	84,097	24·0	24·2	28·1	21·8	25·6	15·5	25·9	16·6
Bradford	219,262	24·8	18·9	29·0	18·1	28·2	16·4	27·0	18·4
Leeds	375,540	31·3	21·7	35·3	18·7	34·7	18·6	32·7	20·1
Sheffield	329,585	31·3	21·6	37·3	21·0	37·0	21·0	35·4	19·7
Hull	204,750	30·9	20·5	37·1	16·7	36·9	18·8	35·0	22·6
Sunderland	132,839	36·3	21·8	39·0	22·4	34·5	19·9	38·5	19·7
Gateshead	88,588	36·6	22·4	37·5	17·1	31·7	17·4	35·2	18·8
Newcastle	192,205	34·7	23·8	36·4	19·5	33·1	16·9	32·9	18·6

* For the purposes of this table, London includes the Strand Union workhouse at Edmonton, the Holborn Union workhouse at Mitcham, and the metropolitan hospitals and asylums situated outside Registration London.

E.—*Divisional Table:—MARRIAGES in the Year ending 30th September; and BIRTHS and DEATHS in the Year ending 31st December, 1892, as Registered Quarterly.*

1 DIVISIONS. (England and Wales.)	2 AREA in Statute Acres.	3 Enumerated POPULATION, 1891 (Unrevised).	4 5 6 7 MARRIAGES in Quarters ending			
			31st December, 1891.	31st March, 1892.	30th June, 1892.	30th September, 1892.
		No.	No.	No.	No.	No.
ENGLD. & WALES....Totals	37,239,351	29,001,018	65,872	42,788	59,864	58,235
I. London	74,692	4,211,056	10,511	6,543	9,748	10,496
II. South-Eastern	3,991,604	2,867,476	6,032	3,588	5,258	5,065
III. South Midland	3,238,579	1,863,666	3,868	1,907	3,210	3,399
IV. Eastern	3,136,622	1,575,260	3,706	1,769	2,628	2,537
V. South-Western	4,997,695	1,908,934	3,884	2,668	3,774	3,259
VI. West Midland	3,964,632	3,244,634	7,878	4,660	6,895	6,396
VII. North Midland	3,535,223	1,806,089	4,250	2,617	4,384	3,403
VIII. North-Western	1,951,126	4,665,916	9,914	7,834	10,142	10,267
IX. Yorkshire	3,726,829	3,218,747	7,615	5,073	6,696	6,556
X. Northern	3,528,621	1,863,120	3,913	3,192	3,278	3,403
XI. Monmthsh. & Wales	5,093,728	1,776,120	4,301	2,937	3,851	3,454

8 DIVISIONS. (England and Wales.)	9 10 11 12 BIRTHS in each Quarter of 1892 ending				13 14 15 16 DEATHS in each Quarter of 1892 ending			
	31st March.	30th June.	30th Septem- ber.	31st Decem- ber.	31st March.	30th June.	30th Septem- ber.	31st Decem- ber.
	No.	No.	No.	No.	No.	No.	No.	No.
ENGLD. & WALES....Totals	219,851	232,385	228,254	216,780	182,482	131,991	115,733	128,884
I. London	33,559	33,394	32,997	31,585	29,364	19,651	17,873	19,282
II. South-Eastern	19,225	19,759	19,295	18,009	18,551	10,655	9,702	10,769
III. South Midland	13,471	13,765	13,715	12,635	11,999	7,320	6,475	7,015
IV. Eastern	11,926	12,385	12,096	11,266	10,880	6,403	5,889	6,235
V. South-Western	12,911	13,153	12,667	12,243	12,215	8,081	6,413	7,666
VI. West Midland	25,361	26,515	25,876	25,200	20,697	15,056	12,514	14,485
VII. North Midland	13,139	14,982	14,922	14,058	9,609	8,031	7,034	7,795
VIII. North-Western	36,964	39,072	39,151	36,637	30,349	23,997	21,412	24,035
IX. Yorkshire	22,770	26,401	26,507	25,180	16,935	15,118	13,491	15,040
X. Northern	16,081	17,409	16,313	15,656	10,791	8,675	7,702	8,479
XI. Monmthsh. & Wales	14,444	15,550	14,715	14,311	11,092	9,004	7,228	8,083

F.—General Meteorological Table,

[Abstracted from the particulars supplied to the

1892. Months.	Temperature of										Elastic Force of Vapour.		Weight of Vapour in a Cubic Foot of Air.	
	Air.			Evaporation.		Dew Point.		Air—Daily Range.		Water of the Thames	Mean.	Diff. from Average of 51 Years.	Mean.	Diff. from Average of 51 Years.
	Mean.	Diff. from Average of 121 Years.	Diff. from Average of 51 Years.	Mean.	Diff. from Average of 51 Years.	Mean.	Diff. from Average of 51 Years.	Mean.	Diff. from Average of 51 Years.					
Jan.....	36.5	-0.2	-1.8	34.8	-2.1	32.4	-2.4	9.2	-0.3	...	In. .184	In. -.016	Gr. 2.1	Gr. -0.3
Feb.....	38.8	0.0	-0.6	36.6	-1.0	33.7	-1.5	10.7	-0.4	...	.193	-.014	2.3	-0.1
Mar. ...	37.3	-3.8	-4.2	34.4	-4.7	30.2	-5.6	14.3	-0.4	...	.168	-.045	2.0	-0.5
Means...	37.5	-1.3	-2.2	35.3	-2.6	32.0	-3.2	11.4	-0.4	...	.182	-.025	2.1	-0.3
April ...	46.9	+0.8	+0.1	42.1	-1.5	36.8	-3.4	23.0	+4.7	...	.218	-.032	2.5	-0.4
May.....	55.2	+2.7	+2.6	49.6	+0.7	44.3	-0.7	23.1	+2.7	...	.292	-.007	3.3	-0.1
June ...	58.1	-0.2	-0.9	53.5	-1.1	49.4	-1.3	22.6	+1.6	...	.353	-.019	3.9	-0.3
Means...	53.4	+1.1	+0.6	48.4	-0.6	43.5	-1.8	22.9	+3.0	...	.288	-.016	3.2	-0.3
July.....	59.6	-2.0	-2.5	55.5	-2.1	51.8	-2.3	19.7	-1.3	...	.385	-.031	4.3	-0.4
Aug. ...	61.7	+0.8	+0.4	57.6	+0.3	54.1	+0.1	21.0	+1.2	...	.419	+0.02	4.6	-0.1
Sept. ...	56.3	-0.2	-0.8	53.4	-0.6	50.5	-0.6	18.8	+0.5	...	.367	-.012	4.1	-0.2
Means...	59.2	-0.5	-1.0	55.5	-0.8	52.1	-0.9	19.8	+0.1	...	.390	-.014	4.3	-0.2
Oct.....	45.4	-4.1	-4.4	43.8	-4.0	41.8	-3.9	14.0	-0.6	...	.265	-.042	3.0	-0.8
Nov. ...	44.9	+2.5	+1.4	43.9	+2.4	42.7	+3.2	10.5	-0.9	...	.274	+0.28	3.2	+0.4
Dec. ...	36.7	-2.3	-2.9	35.3	-2.9	32.9	-3.4	8.8	-0.6	...	.187	-.029	2.2	-0.4
Means...	42.3	-1.3	-2.0	41.0	-1.5	39.1	-1.4	11.1	-0.7	...	.242	-.014	2.8	-0.3

Note.—In reading this table it will be borne in mind that the sign (—) minus signifies

About London the mean daily temperature of the air was below its average from October 1st to the 27th, being particularly so on the 18th, 19th, 24th, and 26th, when it was as much as $10^{\circ}6$, 11° , $11^{\circ}3$, and $12^{\circ}1$ respectively below, and on several other days it was as much as 8° and 9° below; the mean daily deficiency for the twenty-seven days being 7° ; from October 28th to November 17th it was generally above its average, being particularly so on the 28th and 29th of October, and on the 14th, 15th, and 16th of November, when it was as much as $8^{\circ}3$, $9^{\circ}4$, $9^{\circ}4$, $10^{\circ}4$, and $8^{\circ}0$ respectively above, the mean daily excess for the twenty-one days ending November 17th being $2^{\circ}8$; from November 18th to the 25th it was generally below, the mean daily deficiency being $1^{\circ}5$; from November 26th to the 29th it was above, the mean daily excess being $3^{\circ}1$; from November 30th to December 14th it was generally below, being particularly so on the 5th and 6th of December, when it was as much as $10^{\circ}4$

for the Year ended 31st December, 1892.

Registrar-General by JAMES GLAISHER, Esq., F.R.S., &c.]

Degree of Humidity.		Reading of Barometer.		Weight of a Cubic Foot of Air.		Rain.		Daily Horizontal Movement of the Air.	Reading of Thermometer on Grass.						1892. Months.
Mean.	Diff. from Average of 51 Years.	Mean.	Diff. from Average of 51 Years.	Mean.	Diff. from Average of 51 Years.	Amnt.	Diff. from Average of 77 Years.		Number of Nights it was			Lowest Reading at Night.	Highest Reading at Night.		
									At or below 30°.	Between 30° and 40°.	Above 40°.				
85	— 2	In. 29·687	In. —·078	Grs. 554	Grs. 0	In. 0·38	In. —1·48	Miles. 293	25	4	2	18·1	41·2	January	
82	— 3	29·621	—·187	551	— 2	1·69	+0·15	296	12	14	3	15·9	41·5	Feb.	
76	— 5	29·842	+·095	557	+ 7	1·09	—0·46	290	21	8	2	16·5	40·0	March	
81	— 3	29·717	—·057	554	+ 2	Sum 3·16	Sum —1·79	Mean 293	Sum 58	Sum 26	Sum 7	Lowest 15·9	Highest 41·5	Means	
69	—11	29·828	+·086	546	+ 3	1·42	—0·31	234	16	11	3	22·3	42·3	April	
67	—12	29·821	+·039	536	— 4	1·66	—0·41	274	4	16	11	21·3	51·3	May	
73	— 2	29·828	+·017	533	+ 1	2·27	+0·29	263	1	9	20	29·5	54·0	June	
70	— 8	29·826	+·047	538	0	Sum 5·35	Sum —0·43	Mean 257	Sum 21	Sum 36	Sum 34	Lowest 21·3	Highest 54·0	Means	
76	0	29·842	+·050	531	+ 3	1·54	—1·04	276	0	1	30	39·5	51·8	July	
77	0	29·757	—·023	527	— 2	3·03	+0·65	250	0	4	27	35·0	55·1	August	
81	0	29·811	+·005	534	+ 1	2·01	—0·35	254	2	13	15	28·2	53·0	Sept.	
78	0	29·803	+·011	531	+ 1	Sum 6·58	Sum —0·74	Mean 260	Sum 2	Sum 18	Sum 72	Lowest 28·2	Highest 55·1	Means	
87	— 2	29·545	—·169	542	+ 2	3·88	+1·12	279	11	17	3	17·4	50·0	October	
92	+ 1	29·881	+·142	548	0	2·21	—0·14	199	5	20	5	28·9	49·7	Nov.	
89	0	29·816	+·023	557	+ 4	1·14	—0·83	267	20	7	4	15·0	45·2	Dec.	
89	0	29·747	—·001	549	+ 2	Sum 7·23	Sum +0·15	Mean 248	Sum 36	Sum 44	Sum 12	Lowest 15·0	Highest 50·0	Means	

below the average, and that the sign (+) plus signifies above the average.

and 9°·1 respectively below; the mean daily deficiency for the fifteen days ending December 14th being 4°·7; from December 15th to the 21st it was above, being as much as 10°·3 above on the 15th, the mean daily excess being 4°·8; and from December 22nd to the 31st it was below its average, being particularly so from the 24th to the 30th, the mean daily deficiency for these seven days being 10°·8, and the mean daily deficiency for the ten days ending December 31st being 9°·1.

The mean temperature of the air for December was 36°·7, being 2°·5 and 2°·9 below the average of one hundred and twenty-one and fifty-one years respectively; it was 4°·4 lower than in 1891, 6°·9 higher than in 1890, and 0°·9 lower than in 1889.

The mean high day temperature of the air for December was 40°·8, being 3°·6 below the average of fifty-one years; it was 5°·7 lower than in 1891, 7°·5 higher than in 1890, and 0°·9 lower than in 1889.

No. II.—SCOTLAND.

BIRTHS, DEATHS, AND MARRIAGES, IN THE YEAR

ENDED 31ST DECEMBER, 1892.

I.—*Serial Table*:—Number of BIRTHS, DEATHS, and MARRIAGES in Scotland, and their Proportion to the Population estimated to the Middle of each Year, during each Quarter of the Years 1892-88 inclusive.

	1892.		1891.		1890.		1889.		1888.	
	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.	Number.	Per Cent.
<i>1st Quarter—</i>										
Births	30,311	2·99	31,563	3·17	30,124	2·96	29,830	2·97	30,481	3·04
Deaths	22,462	2·22	22,471	2·26	23,316	2·29	19,609	1·95	20,824	2·08
Marriages ..	7,257	0·72	6,952	0·70	6,687	0·66	6,318	0·63	5,942	0·59
Mean Tem- perature }	36°·3		38°·2		40°·1		38°·6		36°·5	
<i>2nd Quarter—</i>										
Births	33,195	3·28	33,395	3·31	31,789	3·09	32,294	3·18	32,088	3·20
Deaths	18,623	1·84	20,804	2·07	19,607	1·91	18,213	1·79	18,048	1·80
Marriages ..	7,168	0·71	7,206	0·72	7,079	0·69	6,546	0·64	6,318	0·63
Mean Tem- perature }	48°·4		47°·9		49°·5		51°·0		47°·5	
<i>3rd Quarter—</i>										
Births	30,424	2·97	30,738	3·02	30,300	2·92	30,277	2·95	30,037	2·96
Deaths	15,622	1·53	16,809	1·65	16,668	1·60	16,787	1·63	14,919	1·47
Marriages ..	6,684	0·65	6,560	0·64	6,480	0·62	6,257	0·61	5,892	0·58
Mean Tem- perature }	53°·5		55°·7		55°·4		54°·6		53°·3	
<i>4th Quarter—</i>										
Births	31,081	3·03	30,269	2·97	29,317	2·82	30,369	2·96	30,627	3·02
Deaths	18,861	1·84	23,464	2·30	19,387	1·87	18,594	1·81	17,371	1·71
Marriages ..	7,528	0·74	7,231	0·71	7,195	0·69	7,197	0·70	7,129	0·70
Mean Tem- perature }	39°·6		41°·9		41°·5		42°·6		43°·4	
<i>Year—</i>										
Population.	4,063,451		4,033,180		4,003,132		3,973,305		3,943,701	
Births	125,011	3·08	125,965	3·12	121,530	3·04	122,770	3·09	123,225	3·13
Deaths	75,568	1·86	83,548	2·07	78,978	1·97	73,203	1·84	71,161	1·80
Marriages ..	28,637	0·70	27,949	0·69	27,441	0·65	26,318	0·66	25,281	0·64

II.—*Special Average Table:—Number of Births, Deaths, and Marriages in Scotland and in the Town and Country Districts for each Quarter of the Year ending 31st December, 1892, and their Proportion to the Population; also the Number of Illegitimate Births, and their Proportion to the Total Births.*

Registration Groups of Districts.	Total Births.		Illegitimate Births.		Deaths.		Marriages.	
	Number.	Annual Rate per Cent.	Number.	Per Cent. of Total Births.	Number.	Annual Rate per Cent.	Number.	Annual Rate per Cent.
<i>1st Quarter—</i>								
SCOTLAND	30,311	2'99	2,283	7'5	22,462	2'22	7,257	0'72
Principal towns	11,597	3'15	844	7'3	8,536	2'32	3,173	0'86
Large „	3,953	3'26	221	5'6	2,544	2'10	971	0'80
Small „	6,361	3'06	468	7'4	4,689	2'25	1,416	0'68
Mainland rural	7,711	2'71	709	9'2	5,980	2'10	1,525	0'54
Insular „	689	2'20	41	6'0	713	2'28	172	0'55
<i>2nd Quarter—</i>								
SCOTLAND	33,195	3'28	2,403	7'2	18,623	1'84	7,168	0'71
Principal towns	12,618	3'43	932	7'4	7,773	2'11	3,283	0'89
Large „	4,398	3'63	279	6'3	2,253	1'86	875	0'72
Small „	6,875	3'31	452	6'6	3,677	1'76	1,281	0'62
Mainland rural	8,625	3'03	697	8'1	4,417	1'55	1,649	0'58
Insular „	679	2'17	43	6'3	503	1'61	80	0'26
<i>3rd Quarter—</i>								
SCOTLAND	30,424	2'97	2,293	7'5	15,622	1'53	6,684	0'65
Principal towns	11,286	3'04	849	7'5	6,458	1'74	3,244	0'87
Large „	3,932	3'21	249	6'3	1,860	1'52	887	0'72
Small „	6,447	3'07	483	7'5	3,123	1'49	1,234	0'59
Mainland rural	7,981	2'77	667	8'4	3,813	1'32	1,282	0'45
Insular „	778	2'46	45	5'8	368	1'16	37	0'12
<i>4th Quarter—</i>								
SCOTLAND	31,081	3'03	2,204	7'1	18,861	1'84	7,528	0'74
Principal towns	11,778	3'17	847	7'2	8,270	2'22	3,193	0'86
Large „	3,969	3'24	237	6'0	2,279	1'86	863	0'70
Small „	6,587	3'13	435	6'6	3,649	1'74	1,535	0'73
Mainland rural	8,030	2'79	641	8'0	4,249	1'47	1,803	0'63
Insular „	717	2'27	44	6'1	414	1'31	134	0'42

Population of Scotland.

Population.	Scotland.	Principal Towns.	Large Towns.	Small Towns.	Mainland Rural.	Insular Rural.
By Census of 1891.....	4,025,647	1,454,327	477,496	826,620	1,141,252	125,952
Estimated to the middle of 1892	4,063,451	1,475,126	485,693	834,270	1,142,954	125,408

III.—*Bastardy Table*.—Proportion of ILLEGITIMATE in every Hundred BIRTHS in the Divisions and Counties of SCOTLAND, during each quarter of the Year ending 31st December, 1892; with the Corresponding Figures for 1891 added for Comparison.

Divisions and Counties.	Per Cent. for the Quarters ending 1892.				Per Cent. for the Quarters ending 1891.			
	31st March.	30th June.	30th Sept.	31st Dec.	31st March.	30th June.	30th Sept.	31st Dec.
SCOTLAND	7·5	7·2	7·5	7·1	7·7	7·4	7·5	7·7
<i>Divisions—</i>								
Northern	8·9	8·3	6·3	8·2	6·7	7·9	6·3	7·7
North-Western	6·2	3·9	7·1	6·5	4·8	5·9	5·6	6·5
North-Eastern	13·2	12·4	12·9	11·7	14·3	13·2	12·8	13·5
East Midland	7·5	7·8	8·0	7·3	8·1	8·2	8·0	7·7
West Midland	5·4	5·7	6·5	5·9	6·1	5·8	6·5	6·3
South-Western	6·1	5·8	6·1	5·8	6·2	5·8	6·1	6·1
South-Eastern	7·6	6·5	7·5	6·6	7·4	7·4	6·9	7·8
Southern	13·1	15·9	11·1	13·3	11·2	11·6	12·8	13·2
<i>Counties—</i>								
Shetland	5·1	7·7	1·6	4·5	2·5	5·6	6·6	4·6
Orkney	7·9	8·6	7·4	5·9	6·6	7·9	6·6	6·4
Caithness	13·8	8·3	10·5	13·5	10·7	9·9	7·3	12·1
Sutherland	5·2	8·1	4·2	6·1	3·2	6·7	4·1	5·2
Ross and Cromarty	4·9	3·1	5·5	4·6	3·3	4·6	4·4	5·0
Inverness	7·3	4·7	8·7	8·2	6·3	7·2	6·9	8·2
Nairn	9·3	7·8	5·5	2·2	13·7	11·1	15·2	8·9
Elgin	15·4	11·3	10·7	15·1	14·1	13·5	14·0	14·1
Banff	13·2	14·6	12·4	12·4	15·2	16·0	13·3	12·9
Aberdeen	13·3	12·5	13·4	11·3	14·5	12·4	13·0	13·3
Kincardine	11·3	9·6	14·6	11·6	12·6	14·9	8·0	15·3
Forfar	8·7	9·3	10·1	8·5	10·1	9·4	8·7	8·4
Perth	9·4	9·7	9·1	8·9	6·8	9·1	8·7	8·4
Fife	5·4	5·0	5·3	5·1	6·2	6·3	6·3	6·1
Kinross	4·8	10·3	4·1	7·5	9·4	6·5	11·3	4·7
Clackmannan	4·0	3·2	3·2	5·2	4·8	5·9	8·1	5·4
Stirling	6·0	5·2	6·3	5·7	5·7	5·8	6·1	6·2
Dumbarton	4·3	4·8	5·2	4·5	5·9	4·2	6·4	5·6
Argyll	5·2	8·7	9·7	7·6	6·9	8·5	7·8	7·4
Bute	8·3	4·8	5·3	10·0	9·8	8·3	5·4	7·1
Renfrew	5·0	4·9	5·0	4·6	4·0	5·0	4·4	4·7
Ayr	6·3	6·5	7·1	6·0	6·8	6·4	7·6	7·1
Lanark	6·3	5·9	6·1	6·0	6·5	5·9	6·1	6·2
Linlithgow	6·5	4·1	6·9	4·5	5·2	10·1	5·5	4·6
Edinburgh	7·3	7·0	7·5	6·6	7·6	6·9	6·9	7·9
Haddington	9·8	4·9	7·1	3·6	6·3	8·7	6·8	6·3
Berwick	12·8	7·3	8·4	12·3	11·2	9·9	9·7	13·3
Peebles	6·2	4·0	10·5	8·3	8·7	4·5	11·5	13·4
Selkirk	7·6	8·2	8·5	8·4	8·9	4·9	4·7	8·9
Roxburgh	10·6	9·1	9·3	11·5	8·0	7·8	9·6	10·0
Dumfries	14·1	21·9	12·1	11·7	11·7	12·2	12·1	11·6
Kirkcudbright	8·4	12·1	11·2	14·2	13·9	11·8	13·4	14·3
Wigtown	19·7	16·5	11·0	17·9	11·8	15·1	18·0	19·1

IV.—*Divisional Table:—MARRIAGES, BIRTHS, and DEATHS Registered in the Year ended 31st December, 1892.*

(Compiled from the Registrar-General's Quarterly Returns.)

1	2	3	4	5	6
DIVISIONS. (Scotland)	AREA in Statute Acres.	POPULATION, 1891. (Persons.)	Marriages.	Births.	Deaths.
		No.	No.	No.	No.
SCOTLAND Totals	19,639,377	4,025,647	28,637	125,011	75,568
I. Northern	2,261,622	118,237	427	2,599	2,014
II. North-Western.....	4,739,876	163,836	741	3,944	2,847
III. North-Eastern	2,429,594	433,580	2,756	12,623	7,382
IV. East Midland	2,790,492	629,035	4,314	17,751	10,933
V. West Midland	2,693,176	314,840	1,860	9,569	5,319
VI. South-Western.....	1,462,397	1,563,253	12,818	55,915	32,373
VII. South-Eastern	1,192,524	599,170	4,589	17,568	11,048
VIII. Southern	2,069,696	203,696	1,132	5,042	3,652

No. III.—GREAT BRITAIN.

SUMMARY of MARRIAGES, in the Year ended 30th September, 1892; and of BIRTHS and DEATHS, in the Year ended 31st December, 1892.

(Compiled from the Quarterly Returns of the respective Registrars-General.)

COUNTRIES.	[000's omitted.]		Marriages.	Per 1,000 of Popu- lation.	Births.	Per 1,000 of Popu- lation.	Deaths.	Per 1,000 of Popu- lation.
	Area in Statute Acres.	Popu- lation, 1891. (Persons.)						
England and Wales	37,239,	29,001,	226,881	7·8	897,270	30·9	559,090	19·3
Scotland	19,639,	4,026,	28,340	7·0	125,011	31·1	75,568	18·8
GREAT BRITAIN	56,878,	33,027,	255,221,	7·7	1,022,281	31·0	634,658	19·2

Trade of United Kingdom, 1892-91-90.—Distribution of Exports* from United Kingdom according to their Declared Real Value; and the Declared Real Value (Ex-duty) Imports at Port of Entry, and therefore including Freight and Importer's Profit.

Merchandise (<i>excluding Gold and Silver</i>) Imported from, and Exported to, the following Foreign Countries, &c.	[000's omitted.]					
	1892.		1891.		1890.	
	Imports from	Exports to	Imports from	Exports to	Imports from	Exports to
I.—FOREIGN COUNTRIES.	£	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark & Iceland, & Heligoland	34,957,	12,544,	43,829,	12,920,	43,427,	13,2
Central Europe; viz., Germany, Holland, and Belgium	71,532,	33,418,	71,615,	35,653,	69,368,	37,0
Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	58,295,	21,911,	58,732,	24,760,	60,660,	25,1
Southern Europe; viz., Italy, Austrian empire, Greece, Roumania, Bulgaria, & Malta	9,472,	9,904,	12,345,	11,357,	11,497,	12,5
Levant; viz., Turkey, Asiatic and European (including Cyprus), and Egypt	16,078,	9,394,	16,084,	10,336,	13,197,	10,1
Northern Africa; viz., Tripoli, Tunis, Algeria and Morocco	1,801,	1,063,	1,762,	1,161,	2,090,	1,1
Western Africa	418,	1,078,	600,	1,025,	1,101,	1,6
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Moorria Islands	845,	934,	714,	1,521,	941,	1,2
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	3,970,	3,128,	4,638,	3,464,	3,308,	2,7
South Sea Islands	68,	64,	59,	176,	51,	20
China and Japan, including Hong Kong	5,432,	10,595,	6,996,	11,873,	7,118,	13,2
United States of America	108,200,	26,485,	104,510,	27,545,	97,357,	32,0
Mexico and Central America	1,548,	2,128,	1,899,	2,841,	1,884,	2,9
Foreign West Indies, Hayti, &c.	179,	2,213,	249,	2,323,	320,	3,0
South America (Northern), New Granada, Venezuela, and Ecuador	858,	1,732,	735,	2,360,	687,	2,2
" (Pacific), Peru, Bolivia, Chili, and Patagonia	5,446,	4,506,	4,679,	3,039,	4,524,	4,2
" (Atlantic) Brazil, Uruguay, and Argentine Republic	8,325,	14,836,	8,096,	13,694,	8,821,	17,9
Whale Fisheries; Grnld., Davis' Straits, Southn. Whale Fishery, Falkland Islands, and French Possessions in North America	121,	40,	150,	35,	112,	
<i>Total—Foreign Countries</i>	327,545,	155,973,	337,692,	166,083,	326,463,	181,0
II.—BRITISH POSSESSIONS.						
British India, Ceylon, and Singapore	39,363,	30,930,	41,782,	34,674,	41,377,	37,4
Austral. Cols.—N. So. W., Victoria & Queensld.	19,160,	13,087,	18,535,	18,466,	17,182,	16,5
" " So. Aus., W. Aus., Tasm., N. Zealand, & Fiji Islands	11,385,	6,178,	12,727,	7,031,	12,174,	6,4
British North America	14,571,	7,427,	12,607,	7,245,	12,444,	7,2
" W. Indies with Btsh. Guiana & Honduras	3,143,	3,103,	2,762,	3,109,	2,989,	3,8
Cape and Natal	5,463,	7,919,	6,187,	7,954,	6,096,	9,1
Br. W. Co. of Af., Ascension and St. Helena	1,788,	1,403,	1,778,	1,693,	1,076,	8
Mauritius	230,	770,	268,	258,	265,	3
Channel Islands	1,171,	270,	1,202,	759,	959,	7
<i>Total—British Possessions</i>	96,274,	71,087,	97,848,	81,189,	94,562,	82,5
General Total	£ 423,819,	227,060,	435,540,	247,272,	421,025,	263,5

* i.e., British and Irish produce and manufactures.

Trade of United Kingdom, for the Years 1891-87.—Declared Value of the Total Exports of Foreign and Colonial Produce and Manufactures to each Foreign Country and British Possession.

Merchandise Exported to the following Foreign Countries, &c.	[000's omitted.]				
	1891.	1890.	1889.	1888.	1887.
I.—FOREIGN COUNTRIES.	£	£	£	£	£
Northern Europe; viz., Russia, Sweden, Norway, Denmark, & Iceland, & Heligoland	4,897,	5,507,	5,660,	4,849,	4,507,
Central Europe; viz., Germany, Holland and Belgium	22,564,	23,504,	25,735,	24,177,	24,640,
Western Europe; viz., France, Portugal (with Azores, Madeira, &c.), and Spain (with Gibraltar and Canaries)	8,940,	9,459,	8,879,	10,508,	8,034,
Southern Europe; viz., Italy, Austrian Empire, Greece, Ionian Islands, and Malta	1,153,	1,356,	1,478,	1,461,	1,341,
Eastern Europe; viz., Turkey, Roumania, Syria and Palestine, and Egypt	694,	727,	705,	619,	706,
Northern Africa; viz., Tripoli, Tunis, Algeria, and Morocco	145,	128,	151,	124,	118,
Western Africa	106,	180,	149,	168,	145,
Eastern Africa; with African Ports on Red Sea, Aden, Arabia, Persia, Bourbon, and Kooria Moorla Islands	—	—	—	—	—
Indian Seas, Siam, Sumatra, Java, Philippines; other Islands	52,	54,	88,	72,	48,
South Sea Islands	—	—	—	—	—
China, including Hong Kong and Japan	448,	473,	524,	463,	869,
United States of America	13,522,	14,272,	13,585,	12,314,	10,692,
Mexico and Central America	321,	157,	157,	163,	123,
Foreign West Indies and Hayti	1,024,	1,055,	963,	881,	741,
South America (Northern), New Granada, Venezuela and Ecuador	116,	92,	99,	78,	81,
„ (Pacific), Peru, Bolivia, Chili, and Patagonia	293,	347,	412,	378,	283,
„ (Atlantic), Brazil, Uruguay, and Argentine Confed.	464,	491,	795,	561,	458,
Other countries (unenumerated)	181,	184,	145,	132,	120,
<i>Total—Foreign Countries</i>	54,920,	57,986,	59,525,	56,948,	52,906,
II.—BRITISH POSSESSIONS.					
British India, Ceylon, and Singapore	1,542,	1,774,	1,540,	1,485,	1,653,
Austral. Cols.—New South Wales and Victoria, So. Aus., W. Aus., Tasm., and N. Zealand	2,756,	2,464,	2,742,	3,186,	2,526,
British North America	1,054,	1,047,	1,286,	1,135,	1,112,
„ W. Indies with Btsh. Guiana & Honduras	458,	420,	388,	380,	329,
Cape and Natal	681,	675,	802,	495,	461,
St. W. Co. of Af., Ascension and St. Helena	181,	89,	79,	75,	66,
Auritus	20,	26,	29,	34,	29,
Channel Islands	216,	193,	209,	230,	223,
Other possessions	51,	48,	57,	75,	44,
<i>Total—British Possessions</i>	6,959,	6,736,	7,132,	7,095,	6,443,
General Total	£ 61,879,	£ 64,722,	£ 66,657,	£ 64,043,	£ 59,349,

IMPORTS.—(United Kingdom).—For the Years 1892-91-90-89-88.—*Declared Real Value (Ex-duty), at Port of Entry (and therefore including Freight and Importer's Profit), of Articles of Foreign and Colonial Merchandise Imported into the United Kingdom.*

[000's omitted.]

FOREIGN ARTICLES IMPORTED.		1892.	1891.	1890.	1889.	1888.
		£	£	£	£	£
RAW MATLS.— <i>Textile, &c.</i>	Cotton, Raw ...	37,888,	46,081,	42,757,	45,269,	39,401,
	Wool	28,438,	29,727,	28,586,	30,301,	27,652,
	Silk*	13,366,	14,148,	14,032,	15,387,	13,793,
	Flax	2,674,	2,775,	2,856,	3,066,	2,992,
	Hemp and Jute	6,356,	7,341,	7,868,	8,694,	6,710,
	Indigo	1,357,	1,043,	1,521,	1,783,	1,704,
		90,079,	101,115,	97,620,	104,500,	92,252,
" " <i>Various.</i>	Hides	2,083,	2,437,	2,514,	3,074,	3,002,
	Oils	2,538,	2,639,	2,468,	2,618,	2,197,
	Metals	21,094,	23,030,	23,711,	22,085,	23,243,
	Tallow	1,748,	1,772,	1,729,	1,645,	1,433,
	Timber	17,181,	14,929,	17,127,	19,826,	14,645,
		44,644,	44,807,	47,549,	49,248,	44,520,
" " <i>Agricul.</i>	Guano	189,	138,	167,	191,	202,
	Seeds	7,049,	7,554,	6,872,	7,947,	7,579,
		7,238,	7,692,	7,039,	8,138,	7,781,
TROPICAL, &c., PRODUCE.	Tea	10,090,	10,775,	9,998,	10,023,	10,216,
	Coffee and Chic...	4,026,	3,508,	4,058,	4,411,	3,659,
	Sugar & Molasses	19,952,	20,031,	18,261,	22,653,	18,260,
	Tobacco	3,574,	3,416,	3,543,	3,974,	2,821,
	Rice	2,789,	2,793,	2,549,	2,689,	2,314,
	Fruits	7,106,	6,960,	6,723,	6,215,	6,146,
	Wines	6,036,	5,995,	5,891,	5,909,	5,386,
	Spirits	2,198,	2,343,	2,128,	1,859,	1,759,
		55,771,	55,821,	53,151,	57,733,	50,561,
FOOD	Grain and Meal.	58,177,	61,571,	53,045,	50,808,	50,675,
	Provisions	52,249,	52,508,	51,198,	47,454,	41,775,
		110,426,	114,079,	104,243,	98,262,	92,450,
Remainder of Enumerated Articles ...		70,915,	66,857,	66,517,	65,103,	58,939,
TOTAL ENUMERATED IMPORTS		379,073,	390,371,	376,119,	382,984,	346,503,
Add for UNENUMERATED IMPORTS (say)		44,819,	45,320,	44,767,	44,227,	40,079,
TOTAL IMPORTS:		423,892,	435,691,	420,886,	427,211,	386,582,

* "Silk," inclusive of manufactured silk, "not made up."

EXPORTS.—(United Kingdom.)—For the Years 1892-91-90-89-88.—*Declared Real Value, at Port of Shipment, of Articles of BRITISH and IRISH Produce and Manufactures Exported from the United Kingdom.*

[000's omitted.]

BRITISH PRODUCE, &c., EXPORTED.		1892.	1891.	1890.	1889.	1888.
		£	£	£	£	£
MANFES.—Textile.	Cotton Manufactures..	56,269,	60,250,	62,079,	58,826,	60,325,
	" Yarn	9,696,	11,190,	12,352,	11,711,	11,656,
	Woolen Manufactures	17,903,	18,452,	20,422,	21,340,	19,991,
	" Yarn	5,284,	3,910,	4,089,	4,342,	4,052,
	Silk Manufactures.....	1,655,	1,745,	2,230,	2,507,	2,666,
	" Yarn	323,	515,	478,	509,	388,
	Linen Manufactures	5,167,	5,031,	5,716,	5,777,	5,553,
	" Yarn	889,	898,	866,	839,	887,
		97,186,	101,991,	108,232,	105,851,	105,518.
" Sewed.	Apparel	4,845,	5,150,	5,036,	4,977,	4,659,
	Haberdy. and Mlnry.	1,757,	1,999,	2,113,	2,251,	2,322,
		6,602,	7,149,	7,149,	7,228,	6,981,
METALS, &c.	Hardware	2,207,	2,525,	2,765,	2,988,	3,167,
	Machinery	14,799,	15,820,	16,413,	15,255,	12,933,
	Iron	21,763,	26,875,	31,582,	29,153,	26,373,
	Copper and Brass.....	4,218,	4,368,	5,058,	3,787,	3,391,
	Lead and Tin	1,252,	1,175,	1,315,	1,282,	1,430,
	Coals and Culm	16,811,	18,895,	19,020,	14,794,	11,341,
		61,050,	69,658,	76,153,	67,259,	58,635,
Ceramic Manufets. Earthenware and Glass		2,786,	2,970,	3,113,	3,240,	3,104,
Indigenous Mnfrs. <i>and Products.</i>	Beer and Ale.....	1,650,	1,704,	1,877,	1,858,	1,706,
	Butter	82,	124,	138,	144,	146,
	Cheese	45,	47,	48,	49,	51,
	Candles	344,	315,	262,	231,	199,
	Salt.....	539,	595,	653,	539,	487,
	Spirits	1,336,	1,271,	1,250,	1,176,	1,137,
		3,996,	4,056,	4,228,	3,997,	3,726,
Various Manufets.	Books, Printed	1,289,	1,389,	1,325,	1,295,	1,245,
	Furniture	531,	593,	647,	—	—
	Leather Manufactures	3,758,	4,229,	4,279,	2,787,	2,683,
	Soap	586,	577,	535,	503,	482,
	Plate and Watches	322,	391,	404,	438,	392,
	Stationery	866,	916,	968,	965,	909,
		7,352,	8,095,	8,158,	5,988,	5,711,
Remainder of Enumerated Articles		32,836,	37,332,	42,354,	37,230,	33,847,
Unenumerated Articles.....		15,252,	16,021,	14,156,	17,299,	16,212,
TOTAL EXPORTS.....		227,060,	247,272,	263,543,	248,092,	233,734,

SHIPPING.—(United Kingdom).—Account of Tonnage of Vessels Entered and Cleared with Cargoes, from and to Various Countries, during the Years ended December, 1892-91-90.

Countries from whence Entered and to which Cleared.	Total British and Foreign.					
	1892.		1891.		1890.	
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.
FOREIGN COUNTRIES.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Russia { Northern ports	1,380,682	1,165,695	1,478,096	1,143,145	1,508,054	1,153,659
{ Southern „	508,025	180,556	797,191	251,574	839,262	213,719
Sweden	1,628,177	1,305,803	1,556,485	1,270,064	1,542,865	1,246,573
Norway	1,283,800	881,267	1,171,293	899,575	1,159,981	803,112
Denmark.....	354,183	1,074,116	376,442	1,086,421	365,928	1,018,471
Germany.....	1,948,003	3,464,223	1,974,764	3,782,367	1,944,907	3,485,666
Holland	2,017,965	1,951,566	1,790,742	1,902,070	1,836,907	1,803,281
Belgium	1,466,255	1,487,994	1,454,371	1,474,902	1,495,715	1,461,290
France.....	2,231,548	3,986,037	2,191,863	4,028,542	2,126,373	3,961,517
Spain	2,533,505	1,382,630	2,232,083	1,421,538	2,891,455	1,392,799
Portugal	129,090	421,351	133,225	446,683	153,176	457,498
Italy	228,994	2,276,135	237,467	2,232,207	261,726	2,417,396
Austrian territories	43,290	157,688	47,975	97,991	46,136	72,344
Greece.....	120,508	148,057	108,735	155,947	110,933	153,911
Roumania	260,962	184,346	374,408	175,677	376,096	122,386
Turkey	318,875	355,741	283,982	341,617	278,161	406,047
Egypt	435,922	933,350	447,304	976,001	350,387	915,743
United States of America....	6,109,057	3,937,828	5,255,570	3,618,191	5,544,836	3,349,880
Mexico, Foreign West	50,576	399,203	74,589	392,094	91,152	441,494
Indies, and Central						
America						
Brazil	135,102	839,743	130,554	893,276	174,606	764,909
Peru.....	55,205	62,896	19,443	43,296	46,806	56,015
Chili	259,206	326,121	268,546	369,133	184,009	403,088
China	125,887	31,262	152,623	90,663	127,956	84,322
Other countries	1,222,918	1,627,550	1,109,608	1,485,019	1,255,822	1,984,192
Total, Foreign Countries	24,847,735	28,581,158	23,667,359	28,577,993	24,713,249	28,169,312
BRITISH POSSESSIONS.						
North American Colonies....	1,592,250	806,539	1,320,818	816,683	1,444,170	814,903
East Indies, including	1,376,070	1,922,644	1,519,890	1,879,419	1,297,783	1,894,557
Ceylon, Singapore, and						
Mauritius						
Australia and New Zealand	772,887	831,733	747,069	1,054,173	716,714	973,701
West Indies	103,034	274,351	97,341	269,790	112,839	283,518
Channel Islands.....	407,244	280,127	321,223	250,235	354,151	276,095
Other possessions	430,649	1,247,273	427,084	1,365,147	341,194	1,444,997
Total, British Possessions	4,682,134	5,362,667	4,433,425	5,635,447	4,266,851	5,687,771
TOTAL FOREIGN COUNTRIES AND BRITISH POSSESSIONS.						
Twelve Months { 1892.....	29,529,869	33,943,825	—	—	—	—
{ ended '91.....	—	—	28,100,784	34,213,440	—	—
{ December, '90.....	—	—	—	—	28,980,100	33,857,083

GOLD AND SILVER BULLION AND SPECIE.—(United Kingdom.)

—Declared Real Value of, IMPORTED AND EXPORTED for the Years

1892-91-90.

[000's omitted.]

Countries.	1892.		1891.		1890.	
	Gold.	Silver.	Gold.	Silver.	Gold.	Silver.
Imported from—	£	£	£	£	£	£
Australia	3,157,	273	4,280,	144,	2,097,	197,
S. America, Brazil, } Mexico, W. Indies }	2,370,	2,001,	4,535,	2,171,	4,412,	2,527,
United States	1,050,	5,303,	7,675,	3,984,	2,594,	4,058,
	6,577,	7,577,	16,490,	6,299,	9,103,	6,782,
France	1,003,	1,336,	1,687,	1,527,	4,848,	2,022,
Germany, Holland, } Belg., and Sweden }	506,	1,296,	920,	1,253,	3,979,	1,122,
Portugal, Spain, } and Gibraltar }	2,263,	118,	6,454,	66,	1,875,	134,
Malta and Egypt.....	580,	12,	41,	28,	515,	187,
China, with Hong } Kong and Japan }	2,895,	151,	1,141,	3,	582,	56,
West Coast of Africa	207,	38,	178,	35,	151,	29,
All other Countries ...	7,440,	218,	3,364,	105,	2,515,	54,
Totals Imported ...	21,471,	10,746,	30,275,	9,316,	23,568,	10,386,
Exported to—						
France	3,819,	151,	5,539,	761,	813,	458,
Germany, Holland, } Belg. & Sweden }	6,844,	402,	7,841,	405,	1,881,	154,
Portugal, Spain, } and Gibraltar }	1,215,	879,	1,095,	4,036,	4,189,	660,
	11,878,	1,432,	14,475,	5,202,	6,883,	1,272,
B. India, China, } Hong Kong and }	174,	11,875,	1,500,	7,082,	2,802,	8,456,
Japan	132,	18,	3,163,	9,	1,012,	629,
United States	—	4,	—	11,	750,	61,
South Africa	1,510,	417,	2,658,	80,	1,855,	151,
S. America, Brazil, } Mexico, W. Indies }	1,138,	333,	2,432,	731,	1,005,	321,
All other Countries ...						
Totals Exported ...	14,832,	14,079,	24,228,	13,115,	14,307,	10,890,
Excess of imports ...	6,639,	—	6,047,	—	9,261,	—
„ exports	—	3,333,	—	3,799,	—	504,

BRITISH CORN.—*Gazette Average Prices* (ENGLAND AND WALES),
Weekly for 1892.

Weeks ended on Saturday.	Weekly Average. (Per Imperial Quarter.)			Weeks ended on Saturday.	Weekly Average. (Per Imperial Quarter.)		
	Wheat.	Barley.	Oats.		Wheat.	Barley.	Oats.
1892.	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	1892.	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Jan. 2	36 4	29 3	20 10	July 2	29 3	23 4	21 8
„ 9	36 2	29 2	20 6	„ 9	29 2	24 4	21 7
„ 16	35 6	29 3	20 7	„ 16	29 1	22 4	21 5
„ 23	34 10	29 5	20 4	„ 23	29 3	22 10	21 —
„ 30	33 10	28 9	20 3	„ 30	29 5	21 1	21 6
Feb. 6	33 1	28 7	20 2	Aug. 6	29 7	23 8	21 6
„ 13	32 3	28 5	19 8	„ 13	29 11	22 9	21 5
„ 20	32 1	28 —	20 —	„ 20	29 7	24 —	21 9
„ 27	32 8	27 10	20 1	„ 27	29 4	23 11	21 2
March 5	33 3	27 9	20 5	Sept. 3	29 1	24 2	20 3
„ 12	32 11	27 11	20 2	„ 10	29 5	27 8	20 2
„ 19	33 —	27 6	20 6	„ 17	29 1	27 11	19 4
„ 26	32 8	27 9	20 4	„ 24	28 4	28 3	18 10
April 2	32 —	27 8	20 5	Oct. 1	27 10	27 11	18 —
„ 9	31 4	26 11	20 2	„ 8	27 9	27 11	17 11
„ 16	30 7	26 10	20 7	„ 15	28 1	27 6	17 8
„ 23	30 8	25 11	20 7	„ 22	28 7	27 9	17 11
„ 30	31 3	26 7	21 —	„ 29	28 8	27 9	17 9
May 7	31 6	25 10	20 7	Nov. 5	28 9	27 7	17 9
„ 14	31 7	25 2	21 4	„ 12	28 3	27 4	18 —
„ 21	31 6	24 10	21 3	„ 19	27 11	26 7	18 —
„ 28	31 2	25 7	21 8	„ 26	27 5	26 —	17 7
June 4	30 8	24 6	21 4	Dec. 3	27 —	25 5	17 2
„ 11	30 5	25 2	21 8	„ 10	26 10	25 1	17 4
„ 18	29 10	23 8	22 2	„ 17	26 4	24 6	16 10
„ 25	29 6	23 4	21 10	„ 24	25 9	24 6	16 10
				„ 31	25 8	24 3	16 3

BRITISH CORN.—*Gazette Average Prices (ENGLAND AND WALES),
Summary of, for 1892, with those for 1891 added for Comparison.*

Average for	Per Imperial Quarter, 1892.						Per Imperial Quarter, 1891.					
	Wheat.		Barley.		Oats.		Wheat.		Barley.		Oats.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
January.....	35	4	29	2	20	6	32	8	28	6	17	9
February	32	6	28	2	19	11	32	3	27	10	18	—
March	32	11	27	8	20	4	33	10	27	8	18	5
<i>First quarter ...</i>	33	7	28	4	20	3	32	11	28	—	18	1
April	31	2	26	9	20	6	38	3	27	8	19	5
May	31	5	25	4	21	2	40	4	27	8	21	10
June	30	1	24	2	21	9	39	9	27	6	21	1
<i>Second quarter....</i>	30	11	25	5	21	2	39	5	27	7	20	9
July	29	2	22	9	21	5	38	6	26	1	21	3
August	29	7	23	7	21	5	39	9	26	2	21	4
September.....	28	11	27	—	19	7	38	5	28	6	20	2
<i>Third quarter ...</i>	29	3	24	5	20	10	38	11	26	11	20	11
October	28	2	27	9	17	10	35	—	29	6	18	9
November	28	1	26	10	17	10	37	10	31	—	21	7
December	26	3	24	9	16	10	37	6	29	11	21	5
<i>Fourth quarter....</i>	27	6	26	5	17	6	36	9	30	2	20	7
THE YEAR	30	4	26	2	19	11	37	—	28	2	20	1

REVENUE OF THE UNITED KINGDOM.

Net Produce in QUARTERS and YEARS ended 31st DEC., 1892-91-90-89.

[000's omitted.]

QUARTERS, ended 31st Dec.	1892.	1891.	1892.		Corresponding Quarters.	
			Less.	More.	1890.	1889.
	£	£	£	£	£	£
Customs	5,647,*	5,497,*	—	150,	5,422,	5,879,
Excise	7,350,*	7,342,*	—	8,	7,120,	7,015,
Stamps	3,480,*	3,200,*	—	280,	3,360,	3,480,
Taxes	35,	25,	—	10,	30,	40,
Post Office	2,630,	2,560,	—	70,	2,490,	2,390,
Telegraph Service	615,	645,	30,	—	615,	590,
Property Tax	19,757,	19,269,	30,	518,	19,037,	19,394,
	1,170,	1,110,	—	60,	1,180,	1,110,
Crown Lands	20,927,	20,379,	30,	578,	20,217,	20,504,
	160,	160,	—	—	160,	160,
Interest on Advances	110,	111,	1,	—	211,	113,
Miscellaneous	582,	914,	332,	—	656,	801,
<i>Totals</i>	21,779,	21,564,	363,	578,	21,244,	21,578,
			NET INCR. £215,			

YEARS, ended 31st Dec.	1892.	1891.	1892.		Corresponding Years.	
			Less.	More.	1890.	1889.
	£	£	£	£	£	£
Customs	19,818,*	19,587,*	—	231,	19,816,	20,423,
Excise	25,748,*	24,710,*	—	1,038,	25,335,	24,625,
Stamps	14,090,*	12,885,*	—	1,205,	13,580,	12,770,
Taxes	2,449,	2,420,	—	29,	2,975,	2,975,
Post Office	10,300,	10,030,	—	270,	9,670,	9,460,
Telegraph Service	2,495,	2,450,	—	45,	2,425,	2,255,
Property Tax	74,900,	72,082,	—	2,818,	73,801,	72,508,
	13,575,	13,325,	—	250,	12,870,	12,480,
Crown Lands	88,475,	85,407,	—	3,068,	86,671,	84,988,
	430,	430,	—	—	430,	430,
Interest on Advances	220,	222,	2,	—	348,	286,
Miscellaneous	2,171,	2,893,	722,	—	3,079,	3,219,
<i>Totals</i>	91,296,	88,952,	724,	3,068,	90,528,	88,963,
			NET INCR. £2,344,			

* Exclusive of transfers to local taxation account.

LONDON CLEARING; CIRCULATION, PRIVATE AND PROVINCIAL.

The London Clearing, and the Average Amount of Promissory Notes in Circulation in ENGLAND and WALES on Saturday in each Week during the Year 1892; and in SCOTLAND and IRELAND, at the Dates, as under.

[0,000's omitted.]

ENGLAND AND WALES.					SCOTLAND.				IRELAND.		
DATES.	London: Cleared in each Week on the preceding Wednesday.	Private Banks. (Fixed Issues, 2,73).	Joint Stock Banks. (Fixed Issues, 2,02).	TOTAL. (Fixed Issues, 4,75).	Average for Four Weeks ending	£5 and upwards.	Under £5.	TOTAL. (Fixed Issues, 2,68).	£5 and upwards	Under £5.	TOTAL. (Fixed Issues, 6,35).
1892.	£	£	£	£	1892.	£	£	£	£	£	£
Jan. 2.....	131,89	98	1,22	2,20	Jan. 2...	2,04	4,74	6,78	3,66	2,98	6,64
" 9.....	147,22	1,00	1,24	2,24							
" 16.....	109,92	99	1,23	2,22							
" 23.....	149,74	97	1,21	2,18							
" 30.....	110,86	95	1,20	2,15	" 30...	1,88	4,35	6,23	3,55	2,84	6,39
Feb. 6.....	153,35	96	1,20	2,16							
" 13.....	118,15	94	1,20	2,14							
" 20.....	151,47	92	1,19	2,11							
" 27.....	120,67	92	1,18	2,10	Feb. 27...	1,78	4,25	6,03	3,53	2,74	6,27
Mar. 5.....	151,07	93	1,18	2,11							
" 12.....	118,50	93	1,18	2,11							
" 19.....	142,03	92	1,18	2,10							
" 26.....	110,36	94	1,19	2,13	Mar. 26...	1,73	4,23	5,96	3,54	2,67	6,21
April 2.....	137,35	97	1,23	2,20							
" 9.....	140,66	1,00	1,26	2,26							
" 16.....	139,48	1,00	1,26	2,26							
" 23.....	89,95	99	1,24	2,23	April 23...	1,78	4,39	6,17	3,63	2,71	6,34
" 30.....	104,82	99	1,25	2,24							
May 7.....	137,34	1,00	1,27	2,27							
" 14.....	110,96	1,00	1,28	2,28							
" 21.....	137,14	98	1,27	2,25	May 21...	2,09	4,69	6,78	2,59	2,67	6,26
" 28.....	99,32	96	1,25	2,21							
June 4.....	150,21	96	1,25	2,21							
" 11.....	95,68	94	1,23	2,17							
" 18.....	132,54	93	1,19	2,12	June 18...	2,18	4,73	6,91	3,41	2,55	5,96
" 25.....	114,28	93	1,17	2,10							
July 2.....	100,50	95	1,17	2,13							
" 9.....	174,64	97	1,18	2,15							
" 16.....	117,58	95	1,16	2,11	July 16...	1,94	4,63	6,57	3,34	2,52	5,86
" 23.....	131,57	93	1,14	2,07							
" 30.....	101,95	92	1,13	2,05							
Aug. 6.....	127,67	91	1,12	2,03							
" 13.....	111,54	91	1,10	2,01	Aug. 13...	1,89	4,49	6,39	3,29	2,51	5,80
" 20.....	120,47	89	1,09	1,98							
" 27.....	99,97	87	1,08	1,95							
Sept. 3.....	111,97	87	1,08	1,95							
" 10.....	109,42	87	1,08	1,95	Sept. 10...	1,88	4,50	6,38	3,24	2,53	5,77
" 17.....	92,29	87	1,08	1,95							
" 24.....	125,46	88	1,09	1,97							
Oct. 1.....	97,50	93	1,12	2,05							
" 8.....	152,19	97	1,17	2,14	Oct. 8...	1,84	4,52	6,36	3,35	2,70	6,05
" 15.....	103,41	96	1,18	2,14							
" 22.....	137,10	94	1,17	2,11							
" 29.....	104,83	94	1,18	2,12							
Nov. 5.....	143,78	94	1,19	2,13	Nov. 5...	1,89	4,62	6,51	3,71	2,94	6,65
" 12.....	110,09	94	1,20	2,14							
" 19.....	135,76	93	1,21	2,14							
" 26.....	115,58	93	1,22	2,15							
Dec. 3.....	137,12	92	1,19	2,11	Dec. 3...	2,26	4,87	7,13	3,69	2,91	6,60
" 10.....	123,81	—	—	—							
" 17.....	105,62	90	1,16	2,06							
" 24.....	148,79	90	1,17	2,07							
" 31.....	94,49	90	1,14	2,04	" 31...	2,06	4,65	6,71	3,47	2,82	6,29

BANK OF ENGLAND.

Pursuant to the Act 7th and 8th Victoria, cap. 32 (1844)

[0,000's omitted.]

1	2	3	4	5	6	7
ISSUE DEPARTMENT.					COLLATERAL COLUMNS.	
Liabilities.	DATES. (Wednesdays.)	Assets.			Notes in Hands of Public. (Col. 1 minus col. 16.)	Minimum Rates of Discount at Bank of England.
Notes Issued.		Government Debt.	Other Securities.	Gold Coin and Bullion.		
£	1892.	£	£	£	£	Per cent. (End of 1891) 3½
Mlms.		Mlms.	Mlms.	Mlms.	Mlms.	
38,14	Jan. 6	11,02	5,43	21,69	25,87	20 Jan. 3
38,50	" 13	11,02	5,43	22,05	25,31	
38,80	" 20	11,02	5,43	22,35	25,03	
38,56	" 27	11,02	5,43	22,11	24,87	
38,46	Feb. 3	11,02	5,43	22,01	25,14	
39,19	" 10	11,02	5,43	22,74	24,63	6 April..... 2½
39,62	" 17	11,02	5,43	23,17	24,50	
40,06	" 24	11,02	5,43	23,60	24,60	
40,12	Mar. 2	11,02	5,43	23,67	25,02	
40,34	" 9	11,02	5,43	23,89	24,92	
40,61	" 16	11,02	5,43	24,16	24,65	27 „ 2
40,80	" 23	11,02	5,43	24,35	24,71	
40,96	" 30	11,02	5,43	24,51	25,54	
40,26	April 6	11,02	5,43	23,81	26,09	
39,46	" 13	11,02	5,43	23,02	26,24	
39,61	" 20	11,02	5,43	23,16	25,76	19 Oct. 3
39,83	" 27	11,02	5,43	23,38	25,73	
39,66	May 4	11,02	5,43	23,21	25,91	
39,85	" 11	11,02	5,43	23,40	25,69	
40,38	" 18	11,02	5,43	23,94	25,59	
40,85	" 25	11,02	5,43	24,40	25,53	
41,15	June 1	11,02	5,43	24,70	26,23	
41,35	" 8	11,02	5,43	24,90	26,08	
41,97	" 15	11,02	5,43	25,52	25,88	
42,89	" 22	11,02	5,43	26,43	25,84	
42,99	" 29	11,02	5,43	26,54	26,70	
42,43	July 6	11,02	5,43	25,98	27,22	
42,03	" 13	11,02	5,43	25,58	26,57	
42,02	" 20	11,02	5,43	25,57	26,50	
42,01	" 27	11,02	5,43	25,56	26,79	
41,96	Aug. 3	11,02	5,43	25,51	27,03	
41,93	" 10	11,02	5,43	25,48	26,66	
42,51	" 17	11,02	5,43	26,06	26,45	
42,90	" 24	11,02	5,43	26,45	26,13	
43,07	" 31	11,02	5,43	26,63	26,28	
42,95	Sept. 7	11,02	5,43	26,51	26,23	
43,03	" 14	11,02	5,43	26,58	27,15	
43,33	" 21	11,02	5,43	26,88	26,49	
43,04	" 28	11,02	5,43	26,59	26,87	
42,19	Oct. 5	11,02	5,43	25,74	27,18	
41,36	" 12	11,02	5,43	24,92	26,96	
40,52	" 19	11,02	5,43	24,07	26,57	
40,18	" 26	11,02	5,43	25,73	26,34	
39,36	Nov. 2	11,02	5,43	22,91	26,37	
39,32	" 9	11,02	5,43	22,87	26,03	
39,46	" 16	11,02	5,43	23,01	25,77	
39,71	" 23	11,02	5,43	23,26	25,52	
39,93	" 30	11,02	5,43	23,48	25,87	
39,75	Dec. 7	11,02	5,43	23,30	25,49	
39,82	" 14	11,02	5,43	23,37	25,45	
39,67	" 21	11,02	5,43	23,22	25,40	
39,61	" 28	11,02	5,43	23,16	25,48	

—WEEKLY RETURN.

for Wednesday in each Week, during the Year 1892.

[0,000's omitted.]

8	9	10	11	12	13	14	15	16	17	18
BANKING DEPARTMENT.										
Liabilities.					DATES. (Wednesdys.)	Assets.				Totals of Liabili- ties and Assets.
Capital and Rest.		Deposits.		Seven Day and other Bills.		Securities.		Reserve.		
Capital.	Rest.	Public.	Private.			Government.	Other.	Notes.	Gold and Silver Coin.	
£	£	£	£			£	£	£	£	
Mins.	Mins.	Mins.	Mins.	Mins.	1892.	Mins.	Mins.	Mins.	Mins.	Mins.
14,55	3,41	6,48	34,14	,15	Jan. 6	13,16	32,51	12,27	78	58,72
14,55	3,44	5,86	31,00	,17	" 13	12,56	28,56	13,19	70	55,01
14,55	3,45	6,25	30,74	,20	" 20	11,66	28,74	13,77	1,02	55,19
14,55	3,45	5,39	30,63	,20	" 27	11,26	28,35	13,69	92	54,22
14,55	3,49	5,41	28,55	,23	Feb. 3	10,16	27,71	13,32	1,05	52,24
14,55	3,50	6,76	27,99	,19	" 10	10,23	27,10	14,56	1,12	53,00
14,55	3,52	8,33	27,29	,21	" 17	10,22	27,50	15,12	1,06	53,90
14,55	3,48	9,70	28,08	,17	" 24	10,51	28,76	15,46	1,26	55,99
14,55	3,74	10,20	28,29	,20	Mar. 2	10,78	29,79	15,10	1,31	56,98
14,55	3,74	10,03	27,56	,20	" 9	10,78	28,48	15,42	1,40	56,00
14,55	3,75	10,58	27,54	,16	" 16	10,78	28,38	15,96	1,46	56,58
14,55	3,77	11,51	28,15	,14	" 23	10,78	29,89	16,09	1,35	58,12
14,55	3,75	11,49	29,94	,13	" 30	10,78	32,26	15,42	1,39	59,86
14,55	3,09	7,73	30,47	,19	April 6	11,26	29,33	14,17	1,27	56,03
14,55	3,10	6,67	28,11	,23	" 13	11,26	26,85	13,22	1,32	52,64
14,55	3,10	5,98	29,55	,15	" 20	11,26	26,98	13,85	1,24	53,33
14,55	3,10	5,89	29,64	,15	" 27	11,26	26,80	14,10	1,16	53,32
14,55	3,10	4,98	30,88	,21	May 4	11,26	27,44	13,75	1,27	53,72
14,55	3,10	5,40	30,34	,17	" 11	11,26	26,90	14,16	1,25	53,57
14,55	3,11	5,48	31,19	,20	" 18	11,26	27,23	14,79	1,25	54,53
14,55	3,10	6,58	30,34	,19	" 25	11,26	26,91	15,32	1,23	54,77
14,55	3,05	6,46	29,60	,22	June 1	11,25	26,52	14,92	1,21	53,00
14,55	3,07	6,75	29,24	,21	" 8	11,25	26,10	15,27	1,19	53,82
14,55	3,08	6,01	30,96	,15	" 15	11,25	26,05	16,09	1,35	54,74
14,55	3,08	6,77	31,37	,17	" 22	11,25	26,41	17,05	1,23	55,94
14,55	3,07	7,63	31,74	,17	" 29	11,25	28,34	16,29	1,27	57,16
14,55	3,28	5,55	34,75	,22	July 6	13,15	28,83	15,21	1,17	58,37
14,55	3,31	4,20	32,51	,21	" 13	13,29	24,89	15,46	1,14	54,78
14,55	3,33	4,79	32,43	,17	" 20	13,49	25,05	15,52	1,19	55,27
14,55	3,34	4,50	32,19	,17	" 27	13,54	24,79	15,22	1,21	54,76
14,55	3,38	4,03	31,88	,17	Aug. 3	13,21	24,67	14,93	1,19	54,01
14,55	3,38	3,54	32,57	,21	" 10	13,11	24,61	15,27	1,26	54,26
14,55	3,40	4,03	31,75	,17	" 17	11,91	24,68	16,06	1,27	53,92
14,55	3,40	3,79	31,73	,18	" 24	11,21	24,53	16,77	1,15	53,66
14,55	3,75	3,66	31,57	,17	" 31	11,21	24,56	16,79	1,14	53,70
14,55	3,75	3,45	31,70	,21	Sept. 7	11,26	24,60	16,72	1,07	53,66
14,55	3,75	3,60	31,28	,19	" 14	11,76	24,54	15,88	1,20	53,87
14,55	3,76	4,36	31,54	,19	" 21	11,76	24,77	16,84	1,04	54,41
14,55	3,76	5,14	29,77	,16	" 28	11,76	24,39	16,17	1,06	53,88
14,55	3,10	5,67	33,16	,20	Oct. 5	15,46	25,08	15,01	1,14	56,70
14,55	3,11	4,53	32,58	,19	" 12	15,46	23,94	14,40	1,17	54,96
14,55	3,11	5,48	31,48	,17	" 19	15,46	24,24	13,95	1,15	54,80
14,55	3,12	5,43	30,87	,15	" 26	15,06	24,00	13,84	1,24	54,13
14,55	3,12	5,23	28,94	,18	Nov. 2	14,36	23,16	12,99	1,51	52,03
14,55	3,12	4,86	28,70	,17	" 9	13,75	22,87	13,29	1,50	51,42
14,55	3,13	4,82	27,79	,18	" 16	12,96	22,18	13,69	1,65	50,49
14,55	3,14	4,02	27,65	,17	" 23	11,56	22,12	14,19	1,66	49,54
14,55	3,08	3,71	28,70	,17	" 30	11,46	23,25	14,06	1,42	50,20
14,55	3,10	3,65	28,78	,20	Dec. 7	11,26	23,37	14,26	1,39	50,28
14,55	3,10	3,73	28,88	,16	" 14	11,26	23,41	14,37	1,39	50,43
14,55	3,11	4,76	29,27	,17	" 21	11,26	25,07	14,18	1,35	51,86
14,55	3,12	4,67	29,38	,15	" 28	11,26	25,26	14,13	1,23	51,87

FOREIGN EXCHANGES.—*Quotations as under, LONDON on Paris, Hamburg, and Calcutta;—and New York, Calcutta, and Hong Kong, on LONDON, for 1892.*

1	2	3	4		5	6	7	8		9	
DATES. (Thursdays)	London on Paris. 3 m. d.	London on Hamburg 3 m. d.	Calcutta.		Indian Council Bills. Minimum Price per Rupee.	New York on London. 60 d. s.	Hong Kong on London. 4 m. d.	Price per Ounce.		Standard Silver in Bars.	
			London on Calcutta.					Gold Bars (Fine).			
1892.			s.	d.	d.	Per cent.	s.	d.	s.	d.	d.
Jan. 14 ...	25·36 $\frac{1}{4}$	20·49	1	4 $\frac{5}{8}$	16 $\frac{11}{32}$	4·82 $\frac{3}{4}$	3	— $\frac{1}{2}$	77	10 $\frac{1}{2}$	42 $\frac{3}{4}$
„ 28 ...	25·35	20·49	1	4 $\frac{1}{8}$	16 $\frac{7}{32}$	4·83 $\frac{3}{4}$	3	— $\frac{1}{8}$	77	10 $\frac{3}{4}$	41 $\frac{9}{16}$
Feb. 11 ...	25·35	20·52	1	3 $\frac{3}{4}$	15 $\frac{13}{16}$	4·85 $\frac{1}{2}$	2	11 $\frac{1}{2}$	77	11	41 $\frac{1}{8}$
„ 25 ...	25·42 $\frac{1}{2}$	20·54	1	3 $\frac{7}{8}$	15 $\frac{5}{32}$	4·85 $\frac{1}{4}$	2	11 $\frac{5}{8}$	77	10 $\frac{1}{4}$	41 $\frac{1}{2}$
Mar. 10 ...	25·33 $\frac{3}{4}$	20·52	1	3 $\frac{3}{4}$	15 $\frac{7}{8}$	4·85 $\frac{1}{2}$	2	11 $\frac{3}{8}$	77	11	41 $\frac{9}{16}$
„ 24 ...	25·30	20·53	1	3 $\frac{5}{8}$	15 $\frac{1}{2}$	4·86 $\frac{1}{4}$	2	10 $\frac{1}{2}$	77	9 $\frac{1}{2}$	40 $\frac{3}{4}$
Apl. 14 ...	25·30	20·53	1	3 $\frac{1}{16}$	15 $\frac{3}{32}$	4·86	2	9 $\frac{3}{4}$	77	9	39 $\frac{9}{16}$
„ 28 ...	25·30	20·54	1	3 $\frac{1}{8}$	15 $\frac{7}{32}$	4·86 $\frac{3}{4}$	2	10 $\frac{1}{4}$	77	9 $\frac{1}{4}$	39 $\frac{13}{16}$
May 12 ...	25·28 $\frac{3}{4}$	20·52	1	3 $\frac{1}{4}$	15 $\frac{1}{4}$	4·86 $\frac{3}{4}$	2	10 $\frac{1}{4}$	77	9	39 $\frac{13}{16}$
„ 26 ...	25·26 $\frac{1}{4}$	20·50	1	3 $\frac{1}{4}$	15 $\frac{11}{32}$	4·86 $\frac{1}{2}$	2	10 $\frac{1}{4}$	77	9	40 $\frac{1}{8}$
June 16 ...	25·28 $\frac{3}{4}$	20·51	1	3 $\frac{1}{2}$	15 $\frac{3}{4}$	4·87 $\frac{1}{4}$	2	11 $\frac{1}{8}$	77	9	40 $\frac{7}{8}$
„ 30 ...	25·30	20·50	1	3 $\frac{3}{8}$	15 $\frac{13}{32}$	4·87 $\frac{1}{4}$	2	10 $\frac{3}{4}$	77	9	40 $\frac{5}{16}$
July 14 ...	25·31 $\frac{1}{4}$	20·50	1	3 $\frac{1}{4}$	15 $\frac{3}{16}$	4·87	2	10 $\frac{5}{8}$	77	9	39 $\frac{3}{4}$
„ 28 ...	25·30	20·52	1	3	15	4·87	2	9 $\frac{7}{8}$	77	9 $\frac{1}{4}$	39 $\frac{1}{16}$
Aug. 11 ...	25·30	20·51	1	2 $\frac{3}{4}$	14 $\frac{3}{4}$	4·87	2	9 $\frac{3}{8}$	77	9 $\frac{1}{4}$	38 $\frac{5}{8}$
„ 25 ...	25·27 $\frac{1}{2}$	20·52	1	2 $\frac{1}{2}$	14 $\frac{5}{8}$	4·86 $\frac{1}{2}$	2	9 $\frac{5}{8}$	77	10	37 $\frac{15}{16}$
Sept. 15 ...	25·27 $\frac{1}{2}$	20·50	1	2 $\frac{1}{2}$	14 $\frac{21}{32}$	4·86 $\frac{1}{4}$	2	9 $\frac{1}{2}$	77	10	38 $\frac{5}{16}$
„ 22 ...	25·27 $\frac{1}{2}$	20·50	1	2 $\frac{9}{16}$	14 $\frac{3}{8}$	4·85	2	9 $\frac{1}{2}$	77	10	38 $\frac{1}{8}$
Oct. 13 ...	25·30	20·48	1	2 $\frac{5}{8}$	14 $\frac{25}{32}$	4·85	2	10 $\frac{5}{16}$	77	11 $\frac{1}{2}$	38 $\frac{1}{2}$
„ 27 ...	25·35	20·52	1	2 $\frac{7}{8}$	15	4·83	2	9 $\frac{7}{8}$	78	— $\frac{1}{2}$	39 $\frac{5}{16}$
Nov. 10 ...	25·32 $\frac{1}{2}$	20·52	1	2 $\frac{13}{16}$	14 $\frac{7}{8}$	4·83 $\frac{1}{4}$	2	9 $\frac{1}{2}$	77	11 $\frac{3}{4}$	38 $\frac{7}{8}$
„ 24 ...	25·31 $\frac{1}{4}$	20·50	1	2 $\frac{13}{16}$	14 $\frac{31}{32}$	4·85	2	9 $\frac{1}{2}$	77	11 $\frac{3}{4}$	38 $\frac{13}{16}$
Dec. 15 ...	25·30	20·51	1	2 $\frac{5}{8}$	14 $\frac{5}{8}$	4·86	2	9	77	10 $\frac{1}{2}$	38 $\frac{1}{4}$
„ 28 ...	25·31 $\frac{1}{4}$	20·52	1	2 $\frac{1}{2}$	14 $\frac{23}{32}$	4·85 $\frac{1}{4}$	2	9 $\frac{1}{8}$	77	11	38

JOURNAL
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PROGRESS of the EXTERNAL TRADE of the UNITED KINGDOM in
RECENT YEARS. By STEPHEN BOURNE, ESQ.

[Read before the Royal Statistical Society, 21st March, 1893.
JOHN B. MARTIN, ESQ., Hon. Sec., in the Chair.]

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In its more extended shape, whatever trading operations have their origin in, or are controlled from within the kingdom, and yet have their ending in the goods reaching its shores, or starting thence to other destinations, would be included in its external trade.

The external trade of the United Kingdom will in the present paper be deemed to relate only to those goods which are brought to its shores from places beyond, or are sent hence to those with whom it has trading relations. In this sense it stands in contrast to any dealings in the articles after they are once brought into the kingdom, or transactions in them before they leave it. These properly come within the category of internal trading; necessary indeed for that which is carried on with people of other countries, but yet different from it because it has no direct connection with any outsiders, and adds nothing to the wealth which the nation gains or loses by its conduct.

Value of Imports and Exports.

Amongst the many papers which it has been my privilege to read at the meetings of this Society, was one having relation to the vexed question of the respective value of the import and export

trades.¹ The object of that paper was not, as erroneously supposed by many, to assert that the prosperity of the nation depended upon its exports exceeding its imports, but twofold: 1st, to ascertain what corrections were needed in the official figures to strike an accurate balance between the two; and 2nd, to show that any sudden or continuous increase of an adverse balance could not betoken, as too many asserted, a prosperous condition of trade for the years in which it took place. The calculations adopted have since then been pretty generally received as correct, and the views set forth were substantiated, in that the year succeeding the one in which the paper was written is acknowledged to have been one of very bad trade, and in it the excess of imports over exports was larger than it had ever attained either before or since. The year just expired stands closest to it in this respect. The continuation of these tables for the intervening years may not therefore be without interest.

The tables then constructed were brought down to 1876, but the last year had to be partly estimated, and the final official accounts introduced some alterations. On this account, and likewise to get the full range of twenty years, those now given commence with 1873 and end with 1892. These years embrace a period during which exactly the same system of obtaining the records had existed, and excluding the two years (1871-72) of transition period are thus properly comparable with each other. This is not the case with those of earlier years, for up to 1854 the absurd system of Official values prevailed, and from that year up to 1871 the values of the imports were computed at the Custom House on the data derived from the mercantile records of actual sales of the goods, or those of a similar kind, after arrival. Now, the importer's agent values his goods before they leave the ship, and being generally in ignorance of their exact quality prior to being sampled, or the price they are likely to realise on actual sale, has to estimate them at current market rates. The former system if carefully worked, though not so ready in its results, may be the most accurate, and be certainly the more economical as involving less clerical work; but on either one continuity of plan exists, so that one year may be compared with every other. It would be hard to say that the values recorded come within 5 or 10 per cent. of actual truth; but there is no reason for supposing that the rate of variation is not pretty constant.

In 1877, in another paper read at Manchester² an analysis of

¹ The growing Preponderance of Imports over Exports in the Foreign and Colonial Trade of the United Kingdom. *Journal*, vol. xl, March, 1877.

² On the Increasing Dependence of this Country upon Foreign Supplies of Food. "Transactions of the Manchester Statistical Society," 1877.

the food imports was made with the view of showing how greatly the excess of imports was occasioned by the growing substitution of foreign for home grown meat, bread and other produce. The tables then prepared have been continued to the year 1891 in a similar paper read in that city on 30th November last.³ Corresponding information for 1892 will be here given.

When dealing with the simple difference in the net amount which has to be provided for in international settlements other than the exchange of goods, it matters little whether that accrues from the quantities of goods or from the prices at which they may have been exchanged; but when viewing our trade in other aspects, these are points of the highest importance, and without their consideration the most delusive impressions may be received. Take for instance the totals of our imports during 1892, which showed the value to have been nearly 12,000,000*l.* below that of 1891, thus supporting the opinion that last year had been one of decline. A careful calculation, however, brought out that there had been an increase in bulk, represented by about 7,000,000*l.* of money,⁴ concurrently with such diminution in prices, as was equivalent to 19,000,000*l.*, and that we had consequently obtained 7,000,000*l.* worth of goods more than in the previous year, with absolutely 12,000,000*l.* less expenditure. On the same principle, the exports of British produce, which showed a decrease of more than 20,000,000*l.* was disadvantageous in both ways, for we had lost 8,000,000*l.* in the quantity, and had obtained 12,000,000*l.* less in the value of the diminished quantity exported.

A collection of these various fluctuations from year to year, commencing with 1878, was laid before the Society in 1889.⁴ The figures down to 1892 will thus cover the last fifteen years.

The period of twenty years before alluded to, is contemporaneous with that of my own connection with this Society, before which it has given me so much pleasure to read papers on the subjects with which my official duties had rendered me familiar. Having become a Fellow not in the heyday of youth, but after thirty-three years spent in the public service, there can be no prospect of retaining power for repeating these contributions. I have sought the privilege of bringing these up to date in what must be looked upon as the conclusion of the several series, leaving it to younger hands and fresher intelligence to put forward future statistics in improved forms. Retaining the hope, however, that what has been done may prove the starting point for what the future exigencies of trade, and the intense desire of

³ Food Imports. "Transactions of the Manchester Statistical Society," 1892.

⁴ Variations in the Volume and Value of Exports and Imports. *Journal*, September, 1889, vol. lii., pp. 404—7.

those engaged in it for the earliest, fullest and clearest information on the various points may find useful in reviewing the past and forecasting the future.

Craving pardon for these digressive preliminary remarks, the first table to which your attention is sought sets forth the several trade totals for each of the last twenty years, and shows the extent to which the goods retained for home use have exceeded in value those exported from the United Kingdom.

TABLE I.—*Total Value of Goods Imported into and Exported from the United Kingdom, from 1873 to 1892.*

[In million of £'s to two decimals.]

Years.	Foreign and Colonial Merchandise.			Produce and Manufacture of the United Kingdom.	Total Exports.	Excess of Imports.
	Total Imports.	Re-exports.	Retained for Home Use.			
	£	£	£	£	£	£
1873	371·29	55·84	315·45	255·16	311·00	60·29
'74	370·08	58·09	311·99	239·56	297·65	72·43
'75	373·94	58·14	315·80	223·47	281·61	92·33
'76	375·15	56·14	319·01	200·64	256·78	118·37
'77	394·42	53·45	340·97	198·89	252·34	142·08
'78	368·77	52·63	316·14	192·85	245·48	123·29
'79	362·99	57·25	305·74	191·53	248·78	114·21
'80	411·23	63·35	347·88	223·06	286·41	124·82
'81	397·02	63·06	333·96	234·02	297·08	99·94
'82	413·02	65·19	347·83	241·47	306·66	106·36
'83	426·89	65·64	361·25	239·80	305·44	121·45
'84	390·02	62·94	327·08	233·03	295·97	94·05
'85	370·97	58·36	312·61	213·11	271·47	99·50
'86	349·86	56·23	293·63	212·73	268·96	80·90
'87	362·23	59·35	302·88	221·91	281·26	80·97
'88	387·64	64·04	323·60	234·53	298·57	89·07
'89	427·64	66·65	360·99	248·94	315·59	112·05
'90	420·69	64·72	355·97	263·53	328·25	92·44
'91	435·44	61·88	373·56	247·23	309·11	126·33
'92	423·79	64·56	359·23	227·08	291·64	132·15
	7,833·08	1,207·51	6,625·57	4,542·54	5,750·05	2,083·03
Average	391·65	60·38	331·27	227·13	287·50	104·15

On inspection of the figures in Col. 1 of the foregoing years, there was no considerable increase in the value of our imports for the first seven years. Slight variations in one year must necessarily take place from seasons, crops, and weather, advancing or retarding arrivals, but substantially our annual receipts were the same through this period from 1872-79, which was admittedly one of bad trade. The exports of British produce and manufactures rapidly fell until in 1879 they amounted to but three-fourths of what they had been in 1873. The excess of

imports grew larger, exceeding in 1877 the largest ever known, and even in 1880 being double what it was in the first year. So true is it that a reduction in the exports is a better indication of depressed trade than any afforded by the imports alone.

In the autumn of 1879 there were signs of the progressive decline having run its course, and that such was the case became manifest in the returns for 1880. One half of the failure in exports from 1873 was recovered, and it was only a sudden accession of imports which delayed the diminution of excess for another year. There were then four or five years of better trade. The British exports increased considerably, but failed to reach the level of 1873; and the imports grew still more rapidly up to 1883. From thence a renewed depression somewhat slowly arose, but being more in the reduction of imports—1887 having been 63,000,000*l.* less than 1883, whilst the exports had only fallen by 18,000,000*l.*—the excess of the former continued to fall in less degree. These were days when the revenue advanced by leaps and bounds, and a series of prosperous years set in, lasting, with some fluctuations, up to 1890 or 1891. In the former of these years the value of British goods exported was higher than ever before known, and in the latter the imports reached a figure never recorded in any previous year. In 1891 the exports fell by 16,000,000*l.*, the precursor of a further decline in 1892 of 20,000,000*l.*, when the imports also receded in value by 12,000,000*l.* It is somewhat curious to notice how often a rise in the imports succeeds that of an addition to exports, as though prosperity in the export trade permitted of a larger import, and this perhaps for one reason amongst others, that increased manufacture for export, especially in textiles, requires increased supplies of the raw material from which they are prepared. We have now reached a year in which, notwithstanding the fall in imports, their excess over exports is larger than in any one since the disastrous year of 1877. In it the imports are more than 50,000,000*l.* beyond 1873, and the exports are 28,000,000*l.* lower than then. The combination of these two elements has raised the excess of the latter to 132,000,000*l.*, more than double the amount at which it stood in the year at which the table commences. The figures of this last year are so remarkable as to merit special attention, which however may be better given later on when the volume and value are considered in conjunction.

Corrections in Balances.

The foregoing table deals only with the figures as given in "Statistical Abstract" (excepting 1892, which are taken from the "Monthly Account of Trade," and may be subject to some alteration when the proper revision has taken place). It would be quite

erroneous to attempt to strike a balance as is done in the last column, and say that the country is losing the difference. As was pointed out in the paper of 1876, there are several adjustments necessary. In the first place there is a continual passing to and fro of bullion and specie, which is not properly either an import or export, but a floating balance available by the lenders of money in exchange for bills of exchange, loans and investments, with which it is constantly interchangeable; but the surplus of incoming or outgoing in the course of the year may be fairly added to or taken away from the apparent excess of imports. This forms the first column in the corrections of the next table. It was indeed once gravely argued in a public report, anxious to throw discredit upon my labours, that no account of imports or exports could possibly give a correct idea of the trade of the country which did not include on both sides the bullion transported. Forthwith the bullion and specie were included amongst the British goods, and it thus happened that a quantity of Japanese gold coins, which were at the time passing to Paris through this country, went to swell the British exports.

A heavier correction needs to be made on account of freights on imports which, since the import value is that after arrival here, are an increase which does not pertain to the exports, the value of which is taken on shipment, and generally includes no charge upon the goods subsequent to their shipment. For the purposes of the paper of 1876 very elaborate enquiries were made into the proportion of the valuation which from this cause ought not to be counted as import. For the reasons there set forth it was assumed that a deduction of 11 per cent. would meet the case. Since that period freights have much fallen, and estimates of the proper amounts for the successive years are shown in the third column of the table. But if freights are lower, so also are the values, though not perhaps in the same degree. Therefore the ratio of 11 per cent. will not have a reduction to less than, say, 9 or 10 per cent. There are other minor corrections of the import side, such as insurance, bank charges, and commissions, which, supposing the amount of the imports had to be drawn against by those who send them hither, have to be considered; but these would be difficult to estimate, and must therefore be neglected in the present inquiry.

The corrections on the export side will be all in the shape of additions, and serve towards replacing part of the apparent excess of imports. We build ships for foreigners, which, though not so recorded, are as much an export as the railway carriages are. We supply victualling and other stores to the vessels which transport the goods, and large quantities of coal go out on board the steamers employed in both bringing and taking away. All these constitute

practical exports and are dealt with in arriving at the assumed balances to be provided for.

It must be repeated that there was never any intention of deeming these balances as something to be necessarily drawn from this country; but they are undoubtedly elements on the debit side in all international settlements. The freights we earn abroad by our ships, the interest we receive from our colonial and foreign investments, the profits of our agricultural, manufacturing, and commercial undertakings, and the savings of Englishmen in the numerous places which they choose as the scenes of their labours, must form the like elements on the credit side. They doubtless largely exceed any quantity of goods we may import above those for which our exports pay, and furnish the source from whence we extend our investments, contract for loans, and purchase property abroad. But they in no way justify the dictum that the excess of imports over exports is the test of trading prosperity, especially when, as it was in 1877 and is now in 1892, that excess arises from the immense quantities of food we consume, combined with a diminution of the exported products of our industry, and throws many of the consumers into the ranks of the unemployed.

What was maintained then was amply confirmed by the experience of subsequent years, and may be held—now that the balance against us is so large—is, that either the rapid or the gradual decline of our exports is an evidence and a warning which cannot be slightly passed over as of no importance. The accumulation of income from abroad is of steady, not irregular, progress, and cannot be relied upon to increase just when our sales are low. It is not an excess of imports which is in itself a source of alarm, but a decay of exports, which requires to be watched with care. It is to this that much of the present widespread distress, fostered largely by the operation of wasteful strikes, and still more by the wasteful expenditure in drink, is to be attributed.

The figures in the following table are to a considerable extent conjectural, but they fully account for one-half of the difference between the gross figures of imports and exports, which is so often put forth as a balance that the country must be losing, and both in the total and the yearly average come singularly near to the results of the table in the paper of 1876. They again show that 1877, the year of the greatest trading depression within the whole period embraced by the table, was the one in which both the apparent and the assumed excess of imports was the highest, and that during the year just expired there is the same unfavourable feature to be noticed.

TABLE II.—*Corrections of Excess of Imports in Table I, by additions for Bullion and deductions for Freight from Imports; and additions to Exports for Vessels, Stores, and Coals.*

[In million £'s to two decimals.]

Years.	Apparent Excess of Imports.	Imports.		Exports.			Assumed Balance to be Provided.
		Add Bullion.	Deduct Freight.	Add Ships for Foreigners.	Add Virtualling and Stores.	Add Coals for Steamers.	
	£	£	£	£	£	£	£
1873.....	60.29	+ 4.70	37.1	4.0	3.4	2.64	17.85
'74.....	72.43	+ 7.53	37.0	3.3	3.6	2.36	33.70
'75.....	92.33	+ 5.63	37.4	1.8	3.7	1.92	53.14
'76.....	118.37	+ 7.59	37.5	0.6	3.9	2.0	81.96
'77.....	142.08	— 2.66	39.4	0.5	4.0	1.86	93.66
'78.....	123.29	+ 5.73	36.9	1.3	4.1	1.90	84.82
'79.....	114.21	— 4.42	36.3	1.5	4.3	1.93	65.76
'80.....	124.82	— 2.64	41.1	2.1	4.8	1.92	72.26
'81.....	99.94	— 5.64	39.7	3.2	4.9	2.35	44.15
'82.....	106.36	+ 2.63	41.3	3.5	5.1	2.46	56.63
'83.....	121.45	+ 0.81	42.7	3.7	5.6	3.09	67.17
'84.....	94.05	— 1.62	39.0	2.7	5.3	3.08	42.35
'85.....	99.50	+ 0.23	37.1	1.1	5.4	2.98	53.15
'86.....	80.90	— 0.59	35.0	1.2	5.4	2.82	35.89
'87.....	80.97	+ 0.64	36.2	2.1	5.7	2.85	34.76
'88.....	89.07	— 0.56	38.8	2.7	5.9	2.99	38.12
'89.....	112.05	+ 1.97	42.8	5.5	6.1	3.95	55.67
'90.....	92.44	+ 8.78	42.1	4.8	6.2	5.13	42.99
'91.....	126.33	+ 2.36	43.5	4.2	6.1	5.19	69.70
'92.....	132.15	+ 3.31	42.4	3.3	6.2	4.74	78.82
	2,083.03	+ 33.78	783.3	53.1	99.7	58.16	1,123.55
Average	104.15	+ 1.69	39.46	2.65	4.99	2.91	56.13

Volume and Value.

The foregoing figures have taken no account of the changes which have occurred in the volume, but simply in the value, of the imports and exports. Together, these formed the subject of a paper read in May, 1889,⁵ and were illustrated by two distinct methods. In the one, use was made of a series of tables furnished year by year to the "Economist," which, taking the difference in the value of one year over another, analysed the lists of both imports and exports in detail, with a view to the determination of how much was due to change in quantity, and how much to change in price. These results were given in detail for eleven years, 1878-88. The total then obtained is now given in the first line of the next tables, and the detail of each year since 1888 up to the one

⁵ *Journal*, vol. lii, September, 1889. On Variations in the Volume and Value of Exports and Imports of the United Kingdom in Recent Years.

just expired, thus bringing down the examination to the present time as regards both imports and exports:—

TABLE III.—*Showing the Total Value of the Foreign and Colonial Goods Imported into the United Kingdom in the Eleven Years 1878-88, and for each succeeding Year, with the Excess or Deficiency when compared with the preceding Year divided into that arising from Variation in Volume and in Value.*

[In million £'s to two decimals.]

Years.	Total Value.	More or Less than previous Year.	Proportion of Variation due	
			To Quantity.	Price.
	£	£	£	£
1878-88.....	4,240·64	1877 — 4·35	+ 113·15	— 117·50
'89	427·64	+ 41·01	+ 35·44	+ 5·57
'90	420·70	— 6·71	— 2·54	— 4·17
'91	435·44	+ 14·81	+ 14·34	+ 0·47
'92.....	423·79	— 11·80	+ 6·90	— 18·70
Variation in } fifteen years }	....	+ 32·96	+ 167·29	— 134·33

Note.—The total values being taken from the “Statistical Abstract,” whereas the calculations were made upon the figures of the “Monthly Journal,” causes a slight divergence in the differences shown in Col. 2 of this and the subsequent tables.

The method pursued in obtaining these results was fully explained in the paper already referred to. In principle it is simple, although involving elaborate calculations year by year. The official tables give for all the principal articles both quantity and value, and it is easily seen that the latter will vary in any given year from the one before, from an increase or decrease in the quantity, and also according as the price is higher or lower; and by applying the price of one year, of any two brought into comparison, to the quantity of the other year, we get a representation in terms of money of the altered quantity of each article. Adding these together the total stands for the volume of the year's trade, and the difference between this sum and the whole value shows the proportion which is due to the variations in price. In the foregoing table the final figures show by how much the value of the imports in 1892 exceeded those of 1877, to what extent the quantity had expanded, and by how much the prices had been reduced. For the fluctuations year by year I must refer to the former paper of 1889; those of the succeeding years are shown in detail.

These figures all refer to the gross imports—a considerable portion of which are again transported to other markets—which

in treating of the consumption at home must be deducted from the original importations. Applying this process to the final figures of the previous table, the conclusion is arrived at that in the course of fifteen years (1878-92) the actual value of the net imports has risen by 22·76 millions of money, that the quantity or volume is equivalent to 136·86 millions more, but that this has been obtained at a cost lessened by 114·10 millions.

TABLE IV.—*Similar Table to the foregoing for Foreign and Colonial Goods Re-exported from the United Kingdom.*

[In million £'s to two decimals.]

Years.	Total Value.	More or Less than previous Years.	Proportion of Valuation due	
			To Quantity.	Price.
	£	£	£	£
1878-88.....	668·04	1877 + 9·84	+ 27·55	— 17·71
'89	66·66	+ 0·90	— 0·22	+ 1·12
'90	64·72	— 0·59	— 1·42	+ 0·83
'91	61·88	— 2·55	— 1·14	— 1·41
'92	64·56	+ 2·60	+ 5·66	— 3·06
Variation in } fifteen years }	....	+ 10·20	+ 30·43	— 20·23

Proceeding to the exports of goods produced or manufactured in this country, the values which have been treated in precisely the same manner amount in the aggregate to 27·93 millions above those of 1877, for which there has been given a volume equivalent to 83·56 millions more, because there has been sustained diminutions in price, but for which they would have been valued at 55·63 millions more.

TABLE V.—*Similar Table for the Exports of British Produce and Manufactured Goods.*

[In million £'s to two decimals.]

Years.	Total Value.	More or Less than previous Years.	Proportion of Valuation due	
			To Quantity.	Price.
	£	£	£	£
1878-88.....	2,438·04	1877 + 34·66	+ 98·61	— 63·95
'89	248·94	+ 15·09	+ 8·62	+ 6·47
'90	263·53	+ 14·61	— 1·26	+ 15·87
'91	247·24	— 16·26	— 13·97	— 2·29
'92	227·08	— 20·17	— 8·44	— 11·73
Variation in } fifteen years }	....	+ 27·93	+ 83·56	— 55·63

It should have been explained before that in the earlier years of this system of comparison it was not possible to compute the

whole of the articles, because many of them were not shown otherwise than by value, and even now it is necessary to estimate a number of them at the same rate as those of a similar class, with which they have for some years past been thrown into groups. Neither is it well to compare any two years arbitrarily chosen, because there are great fluctuations from year to year rather than a steady rate of progress. Thus 1877, the one preceding that with which these comparative tables commence, was one of excessive import, some 20,000,000*l.* more than 1876, and in the following year there was a fall of 26,000,000*l.* The exports were not so disturbed, and hence the excess of imports was the largest on record—over 142,000,000*l.* The nearest approach to this was in last year, when the difference was 132,000,000*l.*, reached not by any rapid accession of one, or depression of the other, but by a more steady progress.

The figures of the excess of imports for the several years analysed in the same method bring out the result, that whilst the beginning and ending of the series did not widely differ in the actual amount, there were great variations in excess of quantity and deficiency in value :—

TABLE VI.—*Similar Table for the Excess of Imports over Exports (for Fifteen Years).*

[In million £'s to two decimals.]

Years.	Total Value.	More or Less than previous Years.	Proportion of Valuation due	
			To Quantity.	Price.
	£	£	£	£
1878	123·29	— 18·80	+ 1·43	— 20·23
'79	114·21	— 9·76	— 6·75	— 3·01
'80	124·82	+ 11·43	+ 1·85	+ 9·58
'81	99·94	— 25·21	— 35·84	+ 10·63
'82	106·36	+ 5·65	+ 11·40	— 5·75
'83	121·45	+ 14·82	+ 18·12	— 3·30
'84	94·12	— 25·77	— 12·84	— 12·93
'85	99·50	+ 9·09	+ 17·02	— 7·93
'86	80·90	— 18·09	— 12·48	— 5·61
'87	80·97	+ 0·72	+ 4·87	— 4·15
'88	89·06	+ 7·07	+ 0·21	+ 6·86
'89	112·04	+ 25·48	+ 27·04	— 1·56
'90	92·45	— 20·72	+ 0·14	— 20·86
'91	126·32	+ 33·62	+ 29·45	+ 4·17
'92	132·15	+ 5·77	+ 9·68	— 3·91
Variations from 1877.... }	....	— 4·70	+ 53·30	— 58·00

Having thus traced these changes under the specific heads, one final table of the same construction may bring together the three several branches of trade—import, re-export, and exports of British

goods—so as to show them in one total for each year, and in this to repeat the figures for the eleven years of the former paper, so as to show at a glance each of the fifteen years during which these computations have been made.

TABLE VII.—*Similar Table for the whole External Trade of the United Kingdom.*

[In million £'s to two decimals.]

Years.	Total Value.	More or Less than previous Years.	Proportion of Valuation due	
			To Quantity.	Price.
	£	£	£	£
1878	614.25	— 32.52	+ 6.77	— 39.29
'79	611.77	— 3.20	+ 30.93	— 34.13
'80	697.64	+ 86.73	+ 55.81	+ 30.92
'81	694.10	— 3.87	+ 11.96	— 15.83
'82	719.68	+ 24.81	+ 34.16	— 9.35
'83	732.33	+ 12.38	+ 36.84	— 24.46
'84	685.99	— 45.89	— 9.14	— 36.75
'85	642.44	— 40.97	— 5.72	— 35.25
'86	618.62	— 23.95	+ 18.00	— 41.95
'87	643.49	+ 24.40	+ 28.41	— 4.01
'88	686.21	+ 42.23	+ 31.29	+ 10.94
'89	743.24	+ 57.00	+ 43.84	+ 13.16
'90	748.95	+ 7.31	— 5.22	+ 12.53
'91	744.56	— 4.00	— 0.77	— 3.23
'92	715.43	— 29.37	+ 4.12	— 33.49
Variations from 1877.... }	....	+ 71.09	+ 281.28	— 210.19

In considering the final figures of this table, which show the difference between the year (1877) prior to that with which it commences, it is necessary to remember that it was an exceptional one, as will be seen in Table I. A sudden increase in the value of the imports raised the excess of these to the highest amount which it has ever reached. There had been for several years a continuous drop in the value of the British exports, which went on until 1880, when they took an upward start, lasting for some four or five years, and during this period there was admittedly a better state of trade; this gave place to a renewed period of depression, from which a temporary reaction set in two or three years back, to be succeeded by times as at present, when everyone admits that we are not in a position of general prosperity.

If for the actual values of 1877, there were substituted an average of the three years, 1876-78, the total increase in the third column of the table would be raised from 71.09l. to 86.87l. millions, and probably, though in the absence of any calculations, the corresponding alteration would reduce the minus amount of the last column to 194.41l.

Taking it in either way the record is one of a continuous though somewhat irregular advance in the whole trade of the kingdom, but it also shows how incomplete an idea is given by the mere figures of actual value, for the method adopted by bringing the actual quantities into representative money terms, tell much greater on the volume than it would otherwise appear to do. It also discloses how great has been the fall in price. Shifting the comparison to 1878, and speaking in round numbers, it may be said that our trade has grown in actual value about 100,000,000*l.*—in quantity equal to 275,000,000*l.*—and fallen in price by the difference, 175,000,000*l.*

Going back to Table III, and the similar tables in the paper of 1889, it may be broadly stated that the value of the imports has risen by 55,000,000*l.*, of which the re-exports have absorbed 10,000,000*l.* That this sum represents a growth in quantity equal to 160,000,000*l.*, of which 30,000,000*l.* has again gone away, and a decrease in the price of 105,000,000*l.*, of which perhaps 20,000,000*l.* is due to the re-exports. It thus follows that the consumers have for an increased expenditure of 45,000,000*l.* obtained supplies which would formerly have cost 130,000,000*l.* more, because there has been a lowering in the price to the extent of 85,000,000*l.*

In the same way it is learnt that the exports of goods produced or manufactured in the kingdom have during the same period increased by about 35,000,000*l.* in the actual value on departure, but that the quantity parted with may be estimated at 83,000,000*l.*, which have realised 48,000,000*l.* less than the prices of the earlier year would have given. These results are purposely put forth in broad terms, because though the investigations on which they rest have been conducted with the utmost care, on which a large amount of labour has been bestowed, the available materials are not full enough to permit of any pretension to absolute precision.

Colonial as distinguished from Foreign Trade.

Any thorough investigation into the progress of trade would require to ascertain the totals of the goods interchanged year by year with each of the countries with whom we trade. The actual values are set forth in the "Annual Statement" issued from the Custom House: they would take up too much space were they abstracted here, and involve too much labour to analyse the quantities and prices as was done with the amount for the whole Kingdom. Yet as bearing upon the *progress* we are making it may be well to abstract the values belonging to the colonial and foreign trade respectively, and serve to show at a glance the course trade is taking by placing in juxtaposition

the imports and the exports for the several years over which the first table spreads. This will not altogether show the exact relative extent of custom with either the one or the other, for the goods are often originally brought from, to be consumed in, very different places to those to which they are credited in the accounts. Such variations it is impossible to trace, though much has been done towards accuracy in requiring that the Bills of Lading, not the port from which the vessel has last come, should govern the country to which they are entered.

TABLE VIII.—*Table showing the Values of both Imports and Exports arriving from, or going to, the Colonies and Foreign Countries respectively.*

[In million £'s to two decimals.]

Years.	British Possessions.		Foreign Places.	
	Imports.	Exports.	Imports.	Exports.
	£	£	£	£
1873	81·01	71·15	290·28	239·86
'74	82·16	77·91	287·92	219·74
'75	84·42	76·66	289·52	204·96
'76	84·33	70·15	290·82	186·62
'77	89·55	75·75	304·87	176·59
'78	77·94	71·99	290·83	173·49
'79	78·94	66·51	284·05	182·27
'80	92·52	81·53	318·71	204·89
'81	91·54	86·68	305·48	210·40
'82	99·43	92·34	313·59	214·32
'83	98·68	90·40	328·21	215·04
'84	95·81	88·30	294·21	207·66
'85	84·40	85·42	286·57	185·98
'86	81·84	82·07	267·98	186·60
'87	83·80	82·27	278·43	198·99
'88	86·92	91·73	300·72	206·85
'89	97·27	90·84	330·37	224·76
'90	96·16	94·52	324·53	233·73
'91	99·46	93·34	335·98	215·78
'92	97·82	87·00	326·00	204·46
20 years	1,784·00	1,656·56	6,049·07	4,092·99
Average	89·20	82·83	302·45	204·63

Two considerations arise upon reading the figures in the first half of this table: the one that the values have not grown in proportion to the growth of the colonies, in the development of their capabilities or the population they have received, but the remarkable decay in prices which Tables III and V set out goes far to explain why the amounts are not larger. The other is that looking to the continual investment which goes on from this country, the exports ought to be much larger, and this applies

especially to the figures on the second column of the succeeding table. Yet with regard to both points it must be remembered that there is an ever increasing intercolonial exchange of goods, and a more direct communication, as for instance of silk and wool, to the European markets in which they are consumed.

Of the second half of the table it may be remarked, and especially so of the exports of British goods in Col. 4 of the next table, that these are in a very insufficient and a diminishing ratio to the extent of the imports from foreign countries.

TABLE IX.—*Table showing the respective Values of the British Goods Exported, and of Foreign Goods Re-exported to British Possessions and Foreign Places.*

[In million £'s to two decimals.]

Years.	British Produce and Manufacture.		Foreign Goods Re-exported.	
	To Colonies.	To Foreign Places.	To Colonies.	To Foreign Places.
	£	£	£	£
1873	66'33	188'83	4'82	51'02
'74	72'28	167'28	5'63	52'46
'75	71'09	152'37	5'56	52'58
'76	64'86	135'78	5'29	50'85
'77	69'92	128'97	5'83	47'62
'78	66'24	126'61	5'77	46'88
'79	61'00	130'53	5'51	51'74
'80	75'25	147'81	6'27	57'08
'81	79'36	154'66	7'32	53'74
'82	84'83	156'64	7'51	57'68
'83	83'48	156'32	6'92	58'71
'84	80'88	152'15	7'43	55'51
'85	77'93	135'11	7'49	50'86
'86	75'50	136'93	6'56	49'67
'87	75'37	146'54	6'90	52'45
'88	84'24	150'29	7'49	56'56
'89	83'28	165'66	7'56	59'10
'90	87'37	176'16	7'15	57'57
'91	85'96	161'28	7'38	54'50
'92	74'58	152'48	7'70	56'70
20 years	1,519'75	3,022'40	131'09	1,076'28
Average.....	75'98	151'12	6'55	58'81

Transshipment of Goods.

There is another branch of trade without the figures for which any statement of the imports and exports would be incomplete, and yet they belong properly to neither or to both. These are the goods which being brought here in one ship, are, without landing, transferred to another for immediate transmission elsewhere. The value of these is not included in any of the foregoing tables. The variation in them from year to year is not great, although there has been a pretty steady decrease, so that the last year is not more than about two-thirds of the first. The fall in

prices will largely account for this, and yet it might have been expected that with the greater frequency of sailings there would be greater facility for the dispatch and economy of at once placing such goods on board the ship destined to convey them to their ultimate market, without incurring the delay and expense of actual landing.

TABLE X.—*Showing the Transshipments of Goods from the Importing to the Exporting Vessel, 1873 to 1892.*

[In million £'s to two decimals.]

	£		£
1873	13·76	1883	11·69
'74	11·42	'84	11·86
'75	12·14	'85	10·96
'76	10·82	'86	10·71
'77	12·18	'87	9·99
'78	11·16	'88	10·94
'79	10·98	'89	10·18
'80	12·54	'90	9·77
'81	12·56	'91	9·92
'82	12·00	'92	10·58
Ten years	119·56	Ten years	106·60

Bullion.

The passage of bullion and specie to and fro is more regulated by the state of the money market and the foreign exchanges than by any import or export in the proper sense; for the same bars of metal or of coin journey backwards and forwards without coming into actual use in either of the countries. It is therefore only the balances which really affect the trade, excepting in so far as they employ our vessels and earn for them freight. Yet the actual figures for each year are worthy of note. The preponderance is shown in Table II (p. 192).

TABLE XI.—*Showing the Yearly Imports of Bullion and Specie, 1873-92.*

[In million £'s to two decimals.]

	Imports.	Exports.		Imports.	Exports.
	£	£		£	£
1873	33·60	28·90	1883	17·22	16·41
'74	30·38	22·85	'84	20·38	22·00
'75	33·26	27·63	'85	22·10	21·78
'76	37·05	29·46	'86	20·42	21·01
'77	37·15	39·81	'87	17·77	17·13
'78	32·42	26·68	'88	22·00	22·56
'79	24·16	28·58	'89	27·10	25·12
'80	16·25	18·89	'90	33·95	25·17
'81	16·86	22·50	'91	39·59	37·23
'82	23·62	20·99	'92	32·22	28·91
	284·75	266·29		252·75	237·32

Shipping.

Another indication of the progress of trade is to be found in the tonnage of vessels belonging to the kingdom, and also of those entering and leaving our ports in the course of each year. The former includes the many which are engaged in making voyages between ports outside the United Kingdom as well as to and from it. The latter, those of all countries arriving at and departing hence. But this subject has been so fully and ably treated by Mr. John Glover⁶ in a recent paper read before this Society, as to render it unnecessary to recapitulate the figures here.

Index Numbers.

A further method of comparing successive years each with the other was introduced in papers read at meetings of the British Association⁷ and employed in the paper before this Society already alluded to.⁸ The plan on which these index numbers were formed was so fully explained in these papers, that it may be sufficient now to state that having been begun with the British exports of 1883, then amounting to close upon 240,000,000*l.*, the number then chosen to represent this value was 1,000, and all the numbers for the preceding and succeeding years have been worked out on the same basis. Applying the same principle to the imports, which in that year were of the value of very nearly 427,000,000*l.*, the index number for this became 1,779, and that of the other years in like proportion. It was then assumed that these same indices should represent the total volume of all the goods exported in the same year of 1883, and the quantity of each article was given the index which its value would require, so that the sum of all these amounted to the index for the whole. Taking then the varying amounts of the other years in connection with the average prices, all the other indices were calculated out, and the totals are shown in the following table.

The computations for 1892, like those previously alluded to, are made from the figures of the "Monthly Account," which is neither so full nor so explicit as those from which the previous years are compiled, and may therefore be subject to some alteration later on. The ranging of the index numbers for the volume and value of imports as well as exports side by side, and in sequence of years, gives a clear view of the progress our trade has taken in both particulars. It will be noticed that the volume of imports

⁶ *Journal*, vol. lv, June, 1892, pp. 205—35.

⁷ "British Association Report," 1885, pp. 859—73; 1888, pp. 536—40.

⁸ *Journal*, 1889, vol. lii, pp. 407—22.

in 1892 is the largest ever known, whilst that of the exports is somewhat lower than in recent years.

TABLE XII.—*Showing the Total Values of the Imports and Exports of the United Kingdom for Fifteen Years 1878-92, reduced to Index Numbers upon the basis of 1883, wherein 240,000,000l. = I.N. 1,000; likewise the Index Numbers for the Volume of the Goods comprised in the Total Values.*

	Imports.		British Exports.	
	Volume.	Value.	Volume.	Value.
1878	1,492	1,537	757	803
'79	1,528	1,512	794	798
1880	1,659	1,713	888	929
'81	1,611	1,654	973	975
'82	1,650	1,721	989	1,006
'83	1,779	1,779	1,000	1,000
'84	1,712	1,625	1,000	971
'85	1,769	1,546	957	888
'86	1,770	1,458	1,014	885
'87	1,798	1,510	1,064	922
'88	1,948	1,615	1,121	974
'89	2,101	1,782	1,158	1,037
1890	2,097	1,753	1,179	1,098
'91	2,153	1,814	1,113	1,030
'92	2,189	1,766	1,064	946
Fifteen years	27,256	24,785	15,071	14,262
Average	1,817	1,652	1,005	951

Looking first to the export side of the table, it will be seen that, passing through several changes in the intervening years, the value for 1892 stands in relation to that of 1883 as 946 to 1,000, but the volume is that of 1,064 to 1,000. So with the imports, the proportion is that of 1,766 to 1,779, in both cases a slight decrease. But in volume the relation is that of 2,189 to 1,779, a large increase. Thus a reduction from 1883 of 5·4 per cent. in the value of the exports is accompanied by a growth of 6·4 per cent. in the quantity, and a fall of but 0·73 in the import value is concurrent with an enlargement of 23·2 per cent. in the bulk of the goods. The results of this method correspond as closely to those of the former tables as could be expected from two totally different modes of calculation, and the greater precision of the latter process.

Imports from specified Countries.

Having thus dealt with the whole trade, and space forbidding an elaborate investigation of the several countries with which it

takes place, a selection has been made of four of those countries which together furnish more than half of the imports we receive. Leaving out Europe from the comparison, for it would be difficult to select one of its parts as so distinct from the others as to stand alone, they serve as a specimen from each of the other quarters of the globe. Three of them are our possessions, the other the foreign State to the trade of which at the present time the greatest interest attaches.

TABLE XIII.—*Table showing the Values of the respective Imports of Colonial and Foreign Goods from India, Australasia, British North America, and United States, 1873-92.*

[In million £'s to two decimals.]

Years.	India.	Australasia.	British North America.	United States.
	£	£	£	£
1873	29'89	17'26	11'73	71'47
'74	31'20	18'55	11'86	73'90
'75	30'14	20'56	10'21	69'59
'76	30'03	21'96	11'02	75'90
'77	31'22	21'73	12'04	77'83
'78	27'47	20'86	9'53	89'15
'79	24'70	21'96	10'45	91'82
'80	30'12	25'66	13'39	107'08
'81	32'63	26'98	11'30	103'21
'82	39'92	25'17	10'40	88'35
'83	38'88	25'94	12'28	99'24
'84	34'45	28'31	11'04	86'28
'85	31'88	23'33	10'35	86'48
'86	32'13	20'95	10'42	81'60
'87	30'53	23'34	10'56	83'05
'88	30'76	25'87	9'27	79'76
'89	36'20	26'80	12'19	95'46
'90	32'67	29'35	12'44	97'28
'91	32'23	31'26	12'61	104'41
'92	30'53	30'54	14'57	108'20
20 years.....	637'58	486'38	227'66	1,770'06
Average.....	31'88	24'32	11'38	88'50

In the aggregate of the twenty years the United States has sent us one-third more than the other three together, and notwithstanding the fall in prices, the value of last year's imports is just half as much again as it was in 1873. Australasia too has grown largely, in even greater degree, but for both India and the Dominion there is little increase beyond that which is hidden under the lower cost.

Exports to certain Countries.

The corresponding table of the exports of our own manufactures deserves grave consideration at least in one respect, for the United

States, which in 1873 barely took from us to the value of one-half of our receipts from her, has now reduced her takings to the one-fourth. The decrease on the export side of the account in the last two years is very marked, and is accompanied by an increase on the other hand in the imports.

TABLE XIV.—*Similar Table for the Exports of British Produce and Manufactures.*

[In million £'s to two decimals.]

Years.	India.	Australasia.	British North America.	United States.
	£	£	£	£
1873	21'35	17'61	8'62	33'57
'74	24'08	19'06	9'33	28'24
'75	24'25	19'49	9'04	21'87
'76	22'41	17'68	7'36	16'83
'77	25'34	19'29	7'61	16'38
'78	23'28	19'57	6'44	14'55
'79	21'37	16'27	5'45	20'32
'80	30'45	16'93	7'71	30'86
'81	29'24	21'38	8'41	29'80
'82	29'06	25'37	9'70	30'97
'83	31'87	24'22	9'16	27'37
'84	30'58	23'90	8'65	24'43
'85	29'29	25'17	7'21	21'99
'86	31'34	22'38	7'89	26'82
'87	30'66	19'77	8'11	29'55
'88	32'61	25'48	7'57	28'90
'89	31'05	22'88	8'14	30'29
'90	33'64	23'01	7'23	32'07
'91	31'18	25'50	7'25	27'54
'92	27'89	19'26	7'43	26'48
20 years.....	560'94	424'22	158'31	518'83
Average.....	28'05	21'21	7'92	25'94

Imports of certain Goods.

As presenting our trade in another aspect, and confining the illustrations to two of import and two of export, the remaining tables distinguish the character of the goods. The official quantities and values show the extent during each of the three latest periods of five years. The rate of progress is shown as to actual value, quantity and price (in the same manner as in Tables III to VII), but for the last year of each period as compared with that of the preceding quinquennium. In the first one of this series the imports for food have been collected together.

TABLE XV.—*Showing the Food Imports (including Tobacco) at the Actual Values of the respective Periods of Five Years, and the Variations in the Fifth Year, 1878-92.*

[In million £'s to two decimals.]

Five Years.	Official Values.	Fifth Year. More or Less.		
		Value.	Quantity.	Price.
	£	£	£	£
1878-82.....	896·32	— 2·84	+ 15·14	— 17·98
'83-87.....	816·27	— 27·63	+ 17·81	— 45·44
'88-92.....	889·23	+ 36·18	+ 33·89	+ 2·29
15 years.....	2,601·82	+ 5·71	+ 66·84	— 61·13

Here the actual increase in cost as between 1877 and 1892 is but 5·71*l.*, but for that there has been obtained a quantity equivalent to 66·84*l.*, at depreciated prices of 61·13*l.*, an enormous gain to the consumer.

For the next table the chief article of raw material has been selected, one on the manufacture of which more of our industry is expended than on any other.

TABLE XVI.—*Similar Table for Imports of Raw Cotton.*

[In million £'s to two decimals.]

Five Years.	Official		Fifth Year. More or Less.		
	Quantities.	Values.	Value.	Quantity.	Price.
	cwts.	£	£	£	£
1878-82....	70·44	202·26	+ 10·70	+ 10·38	+ 0·32
'83-87....	75·02	202·10	— 6·29	+ 0·92	— 7·20
'88-92....	82·43	211·20	— 2·01	....	— 2·01
15 years....	227·89	615·56	+ 2·40	+ 11·30	— 8·89

Of the raw cotton imported, about one-eighth is again exported, and of that retained and worked up into yarns and cloths, only about one-fifth is for home use. Thus about two-thirds of the whole import goes out of the country in the shape of manufactured goods, and any fluctuations in price have an effect upon the export values as well.

Here the growth in quantity has been proportionately much greater than with the food, but the saving in cost comparatively much less.

Exports of certain Goods.

Of the exports of textile manufactures included in the next table, fully two-thirds consist of cotton goods:—

TABLE XVII.—*Similar Table for Exports of Textile Manufactures.*

[In million £'s to two decimals.]

Five Years.	Official		Fifth Year. More or Less.	
	Quantities.	Values.	Quantities.	Price.
	£	£	£	£
1878-82.....	528·21	+ 7·92	+ 18·89	— 10·97
'83-87.....	591·99	— 5·97	+ 11·92	— 17·93
'88-92.....	529·25	— 8·03	— 6·84	— 1·17
15 years.....	1,629·45	— 6·08	+ 23·97	— 30·07

This table is perhaps the most unsatisfactory of the whole, for it marks not only a positive diminution in the value of the goods exported, but a decline in the price exceeding the increase in quantity, both being to the disadvantage of the producer.

TABLE XVIII.—*Table showing the Exports of British Iron in Periods of Five Years. Similar to Imports of Cotton.*

[In million £'s to two decimals.]

Five Years.	Official		Fifth Year. More or Less.		
	Quantities.	Values.	Values.	Quantities.	Price.
	£	£	£	£	£
1878-82....	17·13	125·31	+ 11·46	+ 14·48	— 3·02
'83-87....	18·19	133·25	— 7·53	+ 1·19	— 8·72
'88-92....	18·13	149·40	— 3·97	— 8·23	+ 4·26
15 years....	53·45	407·96	— 0·04	+ 7·44	— 7·48

The same particulars of the transactions in iron exported show that the actual value of the exports in the last year of the series was the same as in 1877, for whilst the quantity exported had largely grown, there was also a decrease in the price to an equal extent.

Conclusion.

The general result of the investigation we have been pursuing is to bring prominently to view the enormous development the trade of the kingdom has experienced—a development not easily seen when the values only are considered, and very much hidden, so far as the quantities are concerned, by the different terms in which these are expressed, and the impossibility of bringing them together, as money can be brought, into one total; but made distinctly apparent by the methods adopted. Several causes have contributed to this advance. Increase of population tells for something, but not nearly for all, and it is evident that consumers consume more

and producers produce more than they formerly did. Facilities of intercourse with other nations and cheapened means of transport have opened the warehouses of the world to supply our wants and gratify our desires, and every day manifests more clearly that we have but to seek for more, and we shall assuredly find the supply to meet our needs. This is more true of the imports than of the exports.

The next point so clearly displayed is that concurrently with increasing quantities there is a continual lowering of the cost of the imports we receive, so that the aggregate growth of values is to a great extent neutralised by the shrinkage of prices. It is proved that where the official values increase, the additions are but the differences between very large additions to the volumes, and corresponding diminutions in price to nearly the same extent. Thus the consumer gains, though it is by no means clear who loses. Cheapened cost of production and distribution when arising from labour-saving machinery, accession of mechanical power or scientific discovery must be of general benefit, but where there is lesser return for capital, or deterioration in the articles themselves, the benefit is not so decided. Another disclosure is in the extending use of foreign food in place of the home grown, which however satisfactory to those who thus have their supplies enlarged, with really very trifling addition of expense, is far from gratifying to those whose means are derived from the use of home land and the employment of native labour. In this respect it is worthy of note that a check to the rapid increase of quantity appears to have set in, and if the returns for the few months of the present year are to be taken as an indication, a great reverse is about to take place.

With the British exports the increase in value over the whole period is not so great as with the imports, and it will be seen in Table I that whereas the year 1877—the one prior to the period of the other tables—was for the imports exceptionally large, it was for the exports one of the three smallest in the whole series, and that we are now again on the descending scale. Here too we notice an increase in quantity combined with decreasing prices, but in neither particular do they keep pace with the imports; and of late years, still more in the months of the present year, the decline is rapid. No doubt the fall in the cost of the raw materials is some set off to deficient prices, but there is no sign of prosperity in our having to sell larger quantities for less money.

To forecast the future is not the special province of the statistician, and the statistics now produced are not altogether such as to induce such a task to be undertaken with a light heart.

DISCUSSION *on* MR. BOURNE'S PAPER.

THE CHAIRMAN (MR. JOHN B. MARTIN), in opening the discussion, regretted the absence of several gentlemen, such as Dr. Giffen and Sir Rawson Rawson, whose experience would have rendered them very able exponents of the subject dealt with in the paper. Several representatives of public departments were present, and he hoped that they would express their views. For himself, he would only say that he was glad Mr. Bourne had given so much prominence to quantities in preference to values; the departmental mind, he thought, was apt to consider values rather than quantities, but in so far as a given sum of money represented a larger bulk of commodities, the consumer was clearly benefited. He was sorry Mr. Bourne had not said more about index numbers, for he agreed with the French statisticians in thinking that little importance could be attached, as a measure of general values, to such as had as yet been prepared, since they did not include services rendered, rents, &c. With regard to bullion, Mr. Bourne showed a net import from 1873 to 1892 of 34,000,000*l.*; but he (the Chairman) had before now expressed his disbelief in the trustworthiness of official figures on this subject. A recent paper by M. Levasseur showed that France had been accumulating gold and silver coin and bullion ever since 1815; England, according to Mr. Bourne, appeared to be doing the same, and yet it was the fashion to complain of the scarcity of gold. He would like once more to enter his protest against taking the year 1873 as a starting point, because it was one from which no average could be drawn, and which afforded a most unjust basis for any conclusions.

MR. A. S. HARVEY thought the paper required very careful consideration. It was quite clear that the paper appeared at a time when all branches of trade were seriously depressed. Indeed it was difficult to find any great branch of industry which was working at a profit. The results brought out by Mr. Bourne with reference to the colonial trade were to his mind especially important, and appeared to throw doubt on the truth of the old dictum that the trade followed the flag. He was moreover unprepared for an actual falling off in the trade with British North America. Speaking broadly, the paper proved that as consumers we were in the happiest condition, having abundance poured in upon us from all sides; but that if we looked upon ourselves as producers and competitors in the world's market, the outlook was by no means so promising.

MR. H. MONCREIFF PAUL was glad to find that Mr. Bourne in his interesting paper had, under the heading "Corrections in Balances," given prominence to various factors which must be

taken into account in a comparison of imports and exports of the United Kingdom. Chief amongst these was the shipping trade. It must not be forgotten that Great Britain was the carrier of the world, and would continue to be so until the United States entered upon a free trade policy. Besides our international trade we had also an inter-imperial trade, and assuming that this was conducted with discretion, a profit would result which would go to swell the value of our imports. For example, goods might be shipped from London to Calcutta, and there be sold, the proceeds being invested in woolpacks or sacks, shipped thence to Melbourne for sale. On disposal of these the proceeds might in turn be invested in wool or other Australian produce, shipped to London, the import value of which on arrival must obviously be greater than the export value of the goods originally shipped to Calcutta. With regard to the remarks of a previous speaker that, judged by statistics, trade with our colonial possessions did not apparently "follow the flag," this impression might have been produced through regarding values merely and not quantities also. In the case of the Australasian colonies, the average of our annual imports and exports for the years 1873-92 was respectively 24.32 millions and 21.21 millions sterling, showing an excess of imports of 3.11 millions. During that period there had been in imports a very marked decline in values, coincident with a large increase in quantities. Of this there is a forcible instance in wool, the staple article of these colonies. From the year 1872, which was its high water mark, until 1892, which might be regarded as its low water mark, there was a decrease in price of $54\frac{3}{4}$ per cent., and an increase in quantity of 186 per cent., so that the total value of wool imported increased only $29\frac{1}{2}$ per cent. The decline in the exports to the Australasian colonies could also be easily accounted for. It was often noticed that soon after a large loan had been floated here, there was a great increase in our own exports thither. This meant that the proceeds of the loan were remitted to the borrowing colony in the shape of railway and other plant. When these loans ceased the exports were very materially affected; and as, of late years, the loans to these colonies, owing to a certain amount of financial distrust, had decreased, so the exports thither had not increased as they would otherwise have done. Such a condition of things was, however, only temporary, since it was well known that the resources of these colonies were very great. New Zealand, a colony which, in her borrowing days, was supposed to advance by leaps and bounds, had recently adopted a more conservative policy, for while between 1882 and 1891 the imports into that colony were on an average a little more than 12*l.*, and the exports over 13*l.* per head, in 1891 they were respectively upwards of 10*l.* and 15*l.* per head, the total imports for that year being $6\frac{1}{2}$ millions and the exports rather over $9\frac{1}{2}$ millions, showing an excess of exports of 3.07 millions. Finally he would remark that whereas London had been the great distributing centre of the world, the tendency now, thanks to the development of telegraphs and steam power, was to bring the consumer *en rapport* with the producer, under the belief that the charges of the so-called

middleman would thereby be saved. In pursuance of this policy strenuous efforts were being made on the continent to establish direct relations with the Australasian colonies, to the detriment of the great mother by whom, in their earlier years, their products had been so widely distributed.

Mr. JOHN GLOVER wished to congratulate Mr. Bourne on the tone of this paper, as he appeared now to have a better opinion of our prospects than he had held in 1877. Mr. Bourne had been responsible for a great deal of public anxiety, caused by his allegations concerning the enormous differences between our imports and exports, and the increase in our demands for foreign food, combined with a decrease in the demand of other countries for our products. Mr. Bourne at that time seemed to be afraid that a fall in wages was in store for us; but that had certainly not come to pass. His former papers, however, had done good in drawing attention to these matters, and he was glad to see that Mr. Bourne had modified his views. The late Mr. Newmarch, he recollected, used to express doubts of the accuracy of the returns of the values of exports and imports, and further inquiries had proved their inaccuracy. It had been shown that important deductions must be made from the value of the imports on account of freight, &c., and that additions must be made to the alleged value of the exports, so that the discrepancy had been very considerably reduced. To-night he was glad to see that the author agreed with this view that the imports were exaggerated and the exports understated, and that there were many things which, though not entering into the returns, had every right to be there. The figures relating to our trade with America were, he thought, among the most significant in the paper. It appeared that in 1873 our exports thither (of British produce and manufacture) were 33,500,000*l.*; in 1878 they had fallen to 14,500,000*l.*, and now they stood at 26,500,000*l.* It was one of the most astonishing features of international trade that our imports of raw cotton and food stuffs should go on increasing at such an enormous rate from a country which levied such heavy import duties. Early free traders would not have believed it possible that we should increase our purchases in a country under such circumstances. The fall in values to which Mr. Bourne alluded was not confined to this country; cost of production had decreased everywhere, and consequently the cost of human subsistence had also fallen. Though the English free trade policy was not followed by any single other country, yet it had been the means of lowering the price of food all over the world. The price of wheat in France and Germany was that of England *plus* the duty; and the Germans, in spite of three times raising the duty on corn, to the great benefit of their exchequer, had not been able to attain their object of protecting their own agricultural industry, owing to the unusual fall in the price of wheat. Mr. Bourne seemed to intimate that as the consumer gained, some one must be the loser by this fall in prices; but he (Mr. Glover) did not agree with him. Cheaper modes of production and of transport, the application of science in every direction,

the use of steam instead of manual power, all helped the producer as well as the consumer, and enabled profit to be made out of lower prices. No one evidently would carry on for any length of time a losing business. Mr. Bourne had referred in his former paper to the wonderful results which had followed the commercial treaty with France in 1860. Other nations had also then introduced the "most favoured nation" clause, under which we had derived great benefits. But now the exigencies of military expenditure in every State of Europe had obliged them to consider, not what was best for commerce, but what would help them to defray the enormous expenses to which they were at present committed, so that under the pressure of military requirements they had been forced to go back to protection. As an economist he frankly confessed that he saw very little hope of free trade being adopted abroad, until the wasteful military expenditure of the continental nations was greatly curtailed.

Mr. H. DEACON thought it might be necessary to deepen the pessimistic tone with which the paper was to some extent pervaded. He recalled three years of prosperity to our trade, 1853, 1863, and 1873, which were also years of European or American warfare. There was a distinct connection between our own prosperity and the fact that in those years our customers and those from whom we imported so largely had been engaged in warfare instead of manufactures. It had been truly said that much of the prosperity that marked recent years had been due to the loans made to the colonies and other countries, which had largely returned to us in export orders. It could not be satisfactory to think that our prosperity depended upon the accident of warfare and upon the degree in which our colonies were induced to increase their indebtedness. The increase in our external trade was also to a certain extent accompanied by a diminution of our native resources. This applied especially to coal, the exports of which increased rapidly, and at the cost of a corresponding impoverishment of the national store. A great proportion of the increase was also due to land going out of cultivation, in consequence of the unremunerative prices of agricultural produce, and the land itself, as a productive commodity, was hence depreciated in value. The policy pursued in past years certainly favoured the consumer; but the consumer was also a producer, and in that capacity he was greatly prejudiced. Natural justice required that the producer should have the first returns as the reward of his labour, risk, and capital. The new President of the United States, in his inaugural address, had drawn attention to the extravagance with which all classes in that country made away with their earnings. This implied that the protective policy of the United States had enriched the people, and the same thing held good in France. Was it not now time for us to shape our policy to the new circumstances that had arisen since Cobden and Bright inaugurated the great change, which at first conduced to great prosperity in this country? Wheat was now at 25s. a quarter, a price which Cobden ridiculed as a possible result of free trade. Again, it is to be noted that

this country is becoming more and more the chosen home of people of fortune, who are not themselves producers, but have large disbursements to make; this means an annual accession of strength to the home demand. Let us therefore be first solicitous to supply to the fullest extent this market at our doors, before going to the ends of the earth in search of foreign openings. He would very much like to see statistics bearing on the *internal* trade of the kingdom, which would show how much was supplied by home and how much by foreign industry, and it would then be for consideration whether people might not be gently persuaded by tariff regulations and patriotic feeling to favour home manufactures rather than foreign, without detriment, but the reverse, to the general prosperity.

Mr. A. E. BATEMAN said that the last speaker had suggested that free trade countries just now were more unfavourably situated in their trade than protective countries, but he would remind the meeting that we alone showed the present values of what we imported and exported. In other countries, a commission sat once a year, or less often, and fixed the prices at which the goods were to be valued for the annual trade returns, but the monthly trade accounts were calculated upon the values of a year or two ago. Our returns consequently showed the depressions in trade as they occurred, while those of foreign nations did not. A further point to be noticed was that, while there was a falling off in our exports of staple goods, there was an increase in the miscellaneous articles, especially in those which were of better quality. While the competition in goods of rough quality was increasing all over the world, the best things were mostly made in England, and year by year we sent to America a greater quantity of the more valuable commodities. We could not hope to supply the world with staple goods as we did fifty years ago, and our hope for the future lay in technical education, which would aid our manufacturers in producing choice articles which could not be made elsewhere.

Mr. F. HENDRIKS said, that comparing 1892 with 1891, it appeared that though there was a reduction in 1892 of the gross aggregate value of our exports and imports of about $4\frac{1}{3}$ per cent., yet by means of our imports we got 7,000,000*l.* worth more of goods at a diminished cost in 1892 compared with 1891 of 12,000,000*l.*, consequently the consumer was benefited to that extent. On the other hand, we got 12,000,000*l.* less for the diminished quantity exported in 1892. This seemed to indicate that our trade was about in *equilibrio* in 1892 as compared with 1891, according to Mr. Bourne's calculations. This afforded also an answer to Mr. Deacon, for if protectionist countries had been able to give higher prices than they actually did in 1892, we should not have lost so much on our exports; but it seemed that a low scale of remuneration for labour was just as prevalent in protectionist as in free trade countries. Low profits and low wages, and a corresponding lowering in the cost of food and other commodities, were applicable to almost all countries in equal ratio.

Mr. GEORGE SAMUEL said it did not follow that because the consumer gained the producer therefore lost. Mr. Bourne seemed to have overlooked the economic contradiction of exchange value and use value. As soon as the quantity of any commodity increased, it was evident that the use value increased and the exchange value fell. There had been an increase in productivity all round, and the only "loser" was unconscious nature. There had been no loss in exchange value; there had simply been an increase in use value, which, unequal distribution apart, had gone to the general good of the whole people.

Mr. STEPHEN BOURNE, in reply, said that he could not quite agree with Mr. Glover that he had raised unnecessary alarm by his paper in 1877. There was then a remarkable condition of trade which had not continued. He recollected being told at that time that no less than 400,000,000*l.* worth of American securities had been transferred from English holders to Americans within the preceding few years. At that time too the investments made by the English were being largely absorbed by the goods we imported, and thus the Americans regained a large proportion of the property held by us in that country. It must not be forgotten that while protection abroad was a considerable disadvantage to our home manufactures, yet we derived a large profit from the investment of English capital in these protected countries; indeed he was not sure that at the present moment the strength of protection in the United States did not lay among a large number of free traders in England. John Bright was said to have been keen enough to see this, and to reap a large profit from the establishment of a carpet manufactory. There were also several large ironmasters in England whose names appeared on the directorate of American companies. Thus much of the profit from protection there came to this country as the reward of our invested capital and labour, and he thought that we had to a certain extent benefited by the system. With regard to the statistics of bullion, he quite agreed with the Chairman in thinking them unreliable; the circumstances connected with the transport of bullion were such as promoted concealment. On one occasion he had found that a quantity of silver exported was valued in the returns at 2*s.* 6*d.* an ounce, at a time when the real value was 5*s.* On inquiry he had ascertained that freight was charged on bullion according to value, and not weight; the shipping company, owing to an agreement with another company, were precluded from accepting lower rates of freight, but had no objection to the owners under-rating the value on which it was charged. He had taken the year 1873 as a starting point in order to give the results for a clear twenty years, and the paper covered the whole period during which the present system had been in force. With regard to Mr. Glover's remarks concerning Mr. Newmarch, it might be pointed out that in drawing attention to the corrections to be applied to the official figures, he (Mr. Bourne) had preceded Mr. Newmarch and Dr. Giffen, and that his own paper had led to their investigations. The present fall in prices, he might

remark, did, in his opinion, necessitate some one's loss. He had been lately speaking with a gentleman who was a large subscriber to several philanthropic institutions, and who had complained that his income had fallen so low, in consequence of the remarkable fall in the price of cotton, that he had been obliged to diminish his contributions. He (Mr. Bourne) believed that when great changes in the price of articles took place, the loss fell not so much on the producer as on those who brought them from abroad, and on those who had a stock on hand at the moment. A large portion of the loss fell on the intermediary, and although the consumer might benefit, the person who supplied him suffered. Probably the ship owner also lost, as he could not get the same freight as before. Mr. Deacon had alluded to the loss of coal. On that subject he (Mr. Bourne) had ventured to disagree with Professor Jevons, and to point out that we were not called upon to reserve a store for our successors, though we were bound not to use it wastefully. Since then there had been a great economy in the use of coal on board steamers; the mineral had been found in large quantities abroad, and petroleum had to some degree superseded it. While the consumer had benefited so largely, wages had not been reduced, but had on the contrary increased considerably. It was a question for economists to consider how far this increase of wages would continue, and whether the large strikes and the enormous waste in drink were not driving away a large proportion of our trade. Generally speaking, it seemed that while more business was being done, yet the profits made were much smaller. Whilst thanking the meeting and the speakers for the appreciation of his paper, he could not at that late hour deal with many points on which he would like to have said something.

PRICES of COMMODITIES *during the* LAST SEVEN YEARS.

By AUGUSTUS SAUERBECK, Esq.

[Read before the Royal Statistical Society, 18th April, 1893.

ROWLAND HAMILTON, Esq., Vice-President, in the Chair.]

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I.—*Introduction.*

SEVEN years have elapsed since my index numbers of the prices of commodities first appeared in the Society's *Journal*, seven years of great moment in the history of trade, comprising times of great activity and great depression, while now complaints are again prevalent, as in 1886, and the battle of the standards is still receiving universal attention. The present time may therefore be a fit one to give a retrospect of the movements during this epoch.

The figures for each year have been published annually in the *Statistical Journal*, and in the Appendix will be found the detailed prices of the forty-five descriptions of commodities during the last fifteen years, their index numbers, and a summary of the index numbers of the prices since 1846, in continuation of figures previously given.

For all details as to the compilation of the tables I have to refer to the Appendix and to the explanations in the *Journal* of 1886, pp. 632—648. I will only mention here that the eleven years 1867-77 had been taken as the standard period, that the average was called 100, and that all fluctuations in the prices were calculated in proportion. It was found that in the aggregate this average is equivalent to the average of the twenty-five years 1853-77. After 1852 the new gold discoveries appeared to have an effect upon prices; the highest year was 1873, when the index number reached 111, and during all these twenty-five years the annual average never sank below 90.

II.—*Prices in 1892.*

Before giving a full review of the whole epoch, I will make a few remarks as to the course of prices during the past year.

The index number for all commodities was 68, or 4 points lower than in the previous year, though on a very close calculation the difference would have been slightly less (1892 = 68·2, 1891 = 71·6, 1890 = 71·7, 1889 = 72·3). The fall in the prices of materials during 1891 had not affected the general index number, as it had been balanced by a corresponding rise of corn, but as the latter lost the whole of this rise in 1892, while the fall of materials continued, the index number receded to 68, being on a par with 1887, the lowest on record. The various articles comprised in the group of corn declined almost uninterruptedly during the past year, until at the end of December English wheat had fallen to 25s. 8d. per quarter (and 24s. 8d. in March, 1893), the lowest price known for the last one hundred or one hundred and thirty years. The middling and inferior sorts of beef and mutton¹ were depressed particularly towards the end of the year, but pork, owing to the great decrease in the number of pigs in this country, ruled distinctly higher than in 1891. Sugar did not vary to any great extent, and kept very near to the average point of the last ten years. The average import price of tea was the lowest ever known, but the inferior sorts have risen sharply since the month of August. Coffee has now been on a very high level for about six years, and is the only article the index number of which is above 100. Metals² remained low, lead particularly being cheaper than ever, and coals were also on the whole much lower than in the two preceding years, although house coal touched extreme prices in March during the great strike. Textiles, which fell heavily in 1890 and 1891, were on the average again lower. Cotton middling

¹ The index numbers for meat in my tables do not include inferior sorts, for which the decline as compared with 1867-77 is much greater; in 1892 the average price of inferior beef was 27d. per 8 lbs., and of inferior mutton 30d., against 43d. and 46d. respectively from 1867-77, showing a decline of 36 per cent., and at these prices large quantities of good imported meat were sold. The prices of live cattle were excessively low in the latter part of the year.

² The prices of Scotch pig iron, which are frequently influenced by bourse speculations and corners, compare as follows with competing sorts and steel rails:—

Average Prices.	1878-87.	1888.	1889.	1890.	1891.	1892.
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Scotch pig iron per ton	46 —	39 11	47 9	49 7	47 2	41 10
Middlesborough No. 3 ... „	38 —	32 9	43 —	47 7	40 —	38 6
Hematites „	54 —	43 6	55 —	58 5	49 9	48 2
Heavy steel rails „	5½ <i>l.</i>	3½ <i>l.</i>	5 <i>l.</i>	5½ <i>l.</i>	4½ <i>l.</i>	4½ <i>l.</i>

American on the spot touched $3\frac{9}{16}d.$ in March, futures being even cheaper, and was practically on a par with the lowest price in 1848, which was $3\frac{1}{2}d.$ It rose, however, to $5\frac{1}{4}d.$, when it became known that the new crop would be much smaller. The average prices of cotton, as well as of wool and silk, were the lowest on record, and flax and hemp have only been very slightly lower before. Jute, influenced by a very short supply in 1891, and an abundant crop in 1892, ruled very high at the beginning of the year, and dropped afterwards over 50 per cent., but recovered again a small part of the decline. Of sundry materials, oils were also lower than in 1891, and petroleum at or below $4\frac{1}{2}d.$ ($4\frac{1}{8}d.$ in March, 1893), has never been so cheap. Tallow and palm oil improved at the end of the year, and have risen further in 1893.

The index number for all commodities of 68 in 1892, was 32 per cent. below the standard period of 1867-77, 14 per cent. below the period 1878-87, and $5\frac{1}{2}$ per cent. below the average of the last ten years. In comparing the average prices of the forty-five descriptions of commodities in 1892 with former periods, it will be observed that only *one* (coffee) was higher than the average standard period of 1867-77, and only *five*³ (coffee, tin, house coal, export coal, and soda) were higher than the period 1878-87. Compared with the average of the last ten years, *six* were distinctly higher (pork, coffee, two coals, jute and soda), *five* were slightly higher (oats, rice, bacon, butter, and bar iron), while thirty-four articles were lower.

The monthly fluctuations of the average index numbers of all the forty-five descriptions of commodities were thus (1867-77=100):—

December, 1889	73·7	April, 1892....	68·9	October, 1892 ...	67·4
„ '90	71·1	May, „	68·8	November, „	68·2
„ '91	71·4	June, „	67·7	December, „	67·7
January, 1892....	70	July, „	67·8	January, 1893....	68·4
February, „	70	August, „	67·4	February, „	69·0
March, „	69·1	September, „	66·8	March, „	68·1

³ This leaves out Russian tallow, the import of which has practically ceased. The average quotations compare as follows with the average prices of Australian tallow, which forms now more than one half of the import (see *Statistical Journal*, 1886, p. 635).

	1878-87.	1886.	1887.	1888.	1889.	1890.	1891.	1892.
	s.	s.	s.	s.	s.	s.	s.	s.
Russian, Y.C.....per cwt.	41	31	31	36	38	38	40	45
Australian mutton „	35½	25	24	27	27	26	26½	26
„ beef „	34	24	23	26	26	25	25½	25

The figures declined until September, when the index number was only 66·8, the lowest on record; since then there was a very slight improvement which, however, made a little further progress at the beginning of 1893.

Silver was on the average 12 per cent. lower than in 1891. It fell to $37\frac{7}{8}d.$ per ounce in August (index number 62·3, or nearly 38 per cent. below the old parity of $15\frac{1}{2}$ silver to 1 gold), which was the lowest price ever known, equal to a proportion of 24·9 to 1 gold. It recovered but slightly from this decline, and was worth $38\frac{5}{16}d.$ at the end of December. On the 22nd March, 1893, it touched a still lower price, viz., $37\frac{9}{16}d.$ per ounce, but rose again to $38\frac{1}{8}d.$ at the end of March.

The arithmetical mean of the forty-five index numbers, which is 68 for 1892, has, as in former years, again been subjected to two tests:—

Firstly, by using the same index numbers of the separate articles, but calculating each article according to its importance in the United Kingdom on the average of the three years 1889-91, when the mean for 1892 is 67·7 against 72 in 1891.⁴

Secondly, by calculating the quantities in the United Kingdom at their actual values (the production on the basis of my price tables, the imports at Board of Trade values, and consequently a considerable portion according to a different set of prices) and at the nominal values on the basis of the average prices from 1867-77. In this case the mean is 70·4 against 74·6 in 1891.

The result of the second calculation differs somewhat from that obtained by ordinary index numbers, and this is due to the high export price of coals, which article forms a large item in the trade of the country. If coals are left out the result, according to quantities (in the second test), will compare as follows with the average of the remaining forty-three index numbers:—

	1892.	1891.	1890.	1889.
According to quantities, percentage	67·7	71·2	70·1	70·9
„ ordinary index numbers	67·4	70·7	70·7	71·9

The following table gives the figures which have served for the second test (see also the *Society's Journal*, 1886, pp. 613—19):—

⁴ For this purpose the nominal values of the various articles on the basis of the average prices from 1867-77, as taken for the second test, have been multiplied by their index numbers and divided by 100. The total of the new values thus obtained is compared with the total at the average prices of 1867-77. The last two years have been calculated according to the importance of the articles on the average of 1889-91, and the years from 1886-90 in previous papers according to the quantities in 1884-86.

Movements of Forty-five Commodities in the United Kingdom (Production and Imports).

	Estimated Actual Value in each Period.	Nominal Values at Average Prices of 1867-77, showing Increase in Quantities.	Movement of Quantities 1848-50 = 100.	Movement of Quantities from Period to Period.	Ratio of Prices according to this Table, 1867-77 = 100.
	Mln. £'s and dec.	Mln. £'s and dec.			
Ave. 1848-50	219·8	294·8	100	—	74·6
" '59-61	350·1	382·7	130	30% over 1849	91·5
" '69-71	456·6	484·6	164	27% " '60	94·2
" '74-76	537·8	538·4	183	—	99·9
" '79-81	489·7	578·5	196	19% over 1870	84·6
" '84-86	445·7	610·1	207	—	73·0
" '89-91	504·1	684·0	232	18% over 1880	73·7
1890.....	499·4	673·0	228	—	74·2
'91.....	521·2	698·5	237	—	74·6
'92*	482·4	685·1	232	—	70·4

* 1892 subject to correction after publication of the mineral produce returns.

The nominal values at the uniform prices of 1867-77 show the exact movement of quantities in the aggregate. The quantities during the three years 1889-91 were on the average 18 per cent. larger than in 1880, and 132 per cent. larger than in 1849. The quantities in 1892 were about 2 per cent. smaller than in 1891.

III.—Average Prices of Whole Periods.

The whole epoch since the crisis of 1847 has been divided into five periods, viz. :—

10 years from 1848 to the crisis in 1857.

9 " '58 " 1866.

11 " '67-77, after which year the index number fell below 90.

10 " '78-87, when prices touched the lowest point.

5 " '88-92, and still in progress.

The following table gives the averages of these periods, and I have added three periods, comprising the time from 1818 to 1847 (the years 1818 to 1845 are calculated from the average prices of thirty-one principal commodities only, the descriptions corresponding as nearly as possible with those since 1846), though I do not attach any great value to them, as prices in England in the first half of the century were so greatly interfered with by legislation—protective duties and prohibitive laws. The averages of the twenty-five years 1853-77, and of the five lowest years before that period, are also inserted for a comparison.

The average of the last five years is 29 per cent. below the old standard period and 10 per cent. below the next period from 1878-87. The fall is greatest in the case of textiles and corn, while the average of minerals is higher than in the period from

1878-87, principally owing to the high prices for coal, and to the great speculation in copper and tin.

Table of Averages of Index Numbers (Percentages), 1867-77 = 100.

Periods.	Corn, &c.	Meat and Butter.	Sugar, Coffee, and Tea.	Total Food.	Mine- rals.	Textiles.	Sundry Mate- rials.	Total Mate- rials.	Grand Total.	Silver.*
1818-27	109	90	151	111	128	105	106	112	111	99
'28-37	95	78	127	96	97	94	92	91	93	98.2
'38-47	102	80	122	99	93	82	93	90	93	98
'48-57	95	79	87	88	93	80	94	89	89	100
'58-66	91	89	100	92	94	117	103	105	99	100.9
'67-77	100	100	100	100	100	100	100	100	100	96.4
'78-87	79	95	76	84	73	71	81	76	79	82.1
'88-92	67	83	70	74	76	63	68	69	71	71.7
1853-77	100	93	99	97	100	104	103	102	100	99
'48-52	80	72	78	77	77	72	79	76	76.4	99

* Silver compared with 60.84*d.* per oz., being the parity between gold and silver at 1 : 15½.

The following figures show in each case the average index numbers of all the forty-five commodities of ten years (see the dotted line in the diagram of the *Journal*, 1886); they give the best picture of the gradual movement of the average prices of whole periods, as the ordinary fluctuations are still further obliterated:—

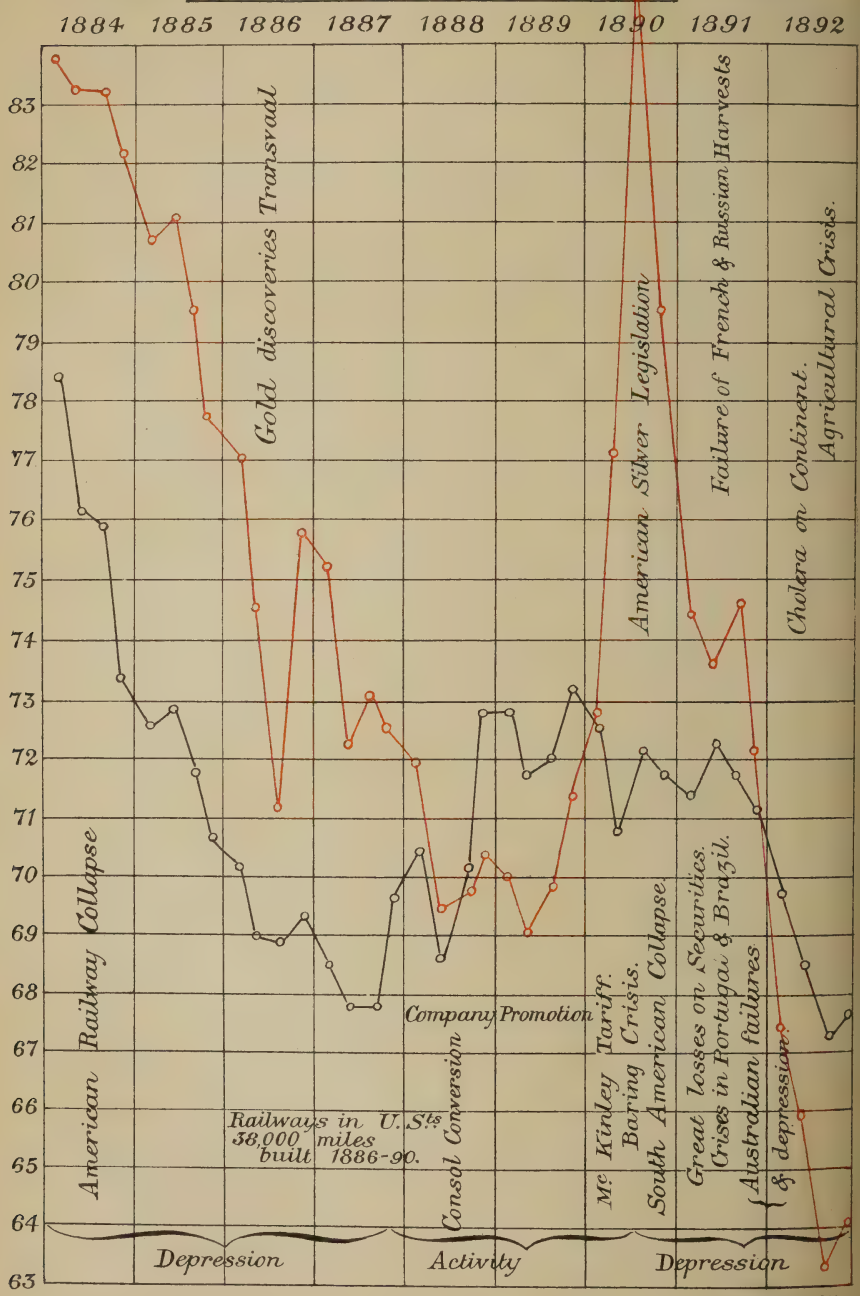
1818-27 = 111	1831-40 = 95	1844-53 = 83	1857-66 = 100	1870-79 = 97
'19-28 = 106	'32-41 = 96	'45-54 = 85	'58-67 = 99	'71-80 = 96
'20-29 = 103	'33-42 = 96	'46-55 = 86	'59-68 = 100	'72-81 = 95
'21-30 = 101	'34-43 = 96	'47-56 = 88	'60-69 = 101	'73-82 = 93
'22-31 = 100	'35-44 = 95	'48-57 = 89	'61-70 = 100	'74-83 = 90
'23-32 = 98	'36-45 = 95	'49-58 = 90	'62-71 = 100	'75-84 = 87
'24-33 = 97	'37-46 = 93	'50-59 = 92	'63-72 = 101	'76-85 = 85
'25-34 = 96	'38-47 = 93	'51-60 = 94	'64-73 = 102	'77-86 = 82
'26-35 = 93	'39-48 = 91	'52-61 = 96	'65-74 = 102	'78-87 = 79
'27-36 = 93	'40-49 = 88	'53-62 = 99	'66-75 = 101	'79-88 = 78
'28-37 = 93	'41-50 = 86	'54-63 = 100	'67-76 = 101	'80-89 = 76
'29-38 = 93	'42-51 = 83	'55-64 = 100	'68-77 = 100	'81-90 = 75
'30-39 = 94	'43-52 = 82	'56-65 = 100	'69-78 = 99	'82-91 = 74
				'83-92 = 72

There was a gradual decline from the early part of the century up to the period 1843-52, when the average was 82; from here to the period 1865-74, a rise to 102, equal to about 24 per cent., and then again a gradual fall, the figure getting lower from decade to decade, until it has now reached 72, being 28 per cent. below the standard period, and 12 per cent. below the most depressed period prior to the great gold discoveries.

IV.—*Quarterly Movements of Prices.*

Figures of monthly fluctuations, such as already given in the first chapter, are in many respects accidental, as they render for

QUARTERLY FLUCTUATIONS OF COMMODITIES & SILVER.



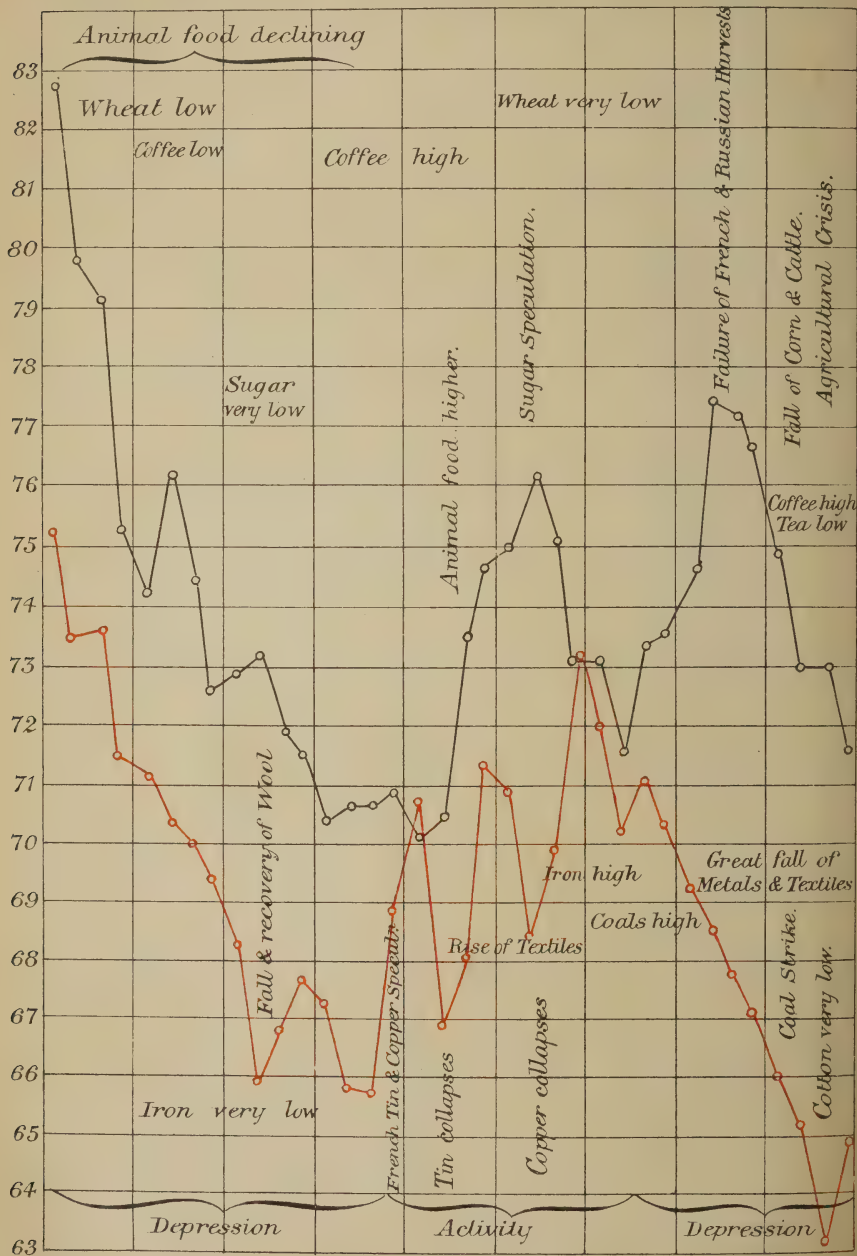
—○— All Commodities (1867- 77=100)

—○— Silver (60.84^d p.03 = 100.)

QUARTERLY FLUCTUATIONS OF FOOD & MATERIALS,

(1867-77 = 100.)

1884 1885 1886 1887 1888 1889 1890 1891 1892



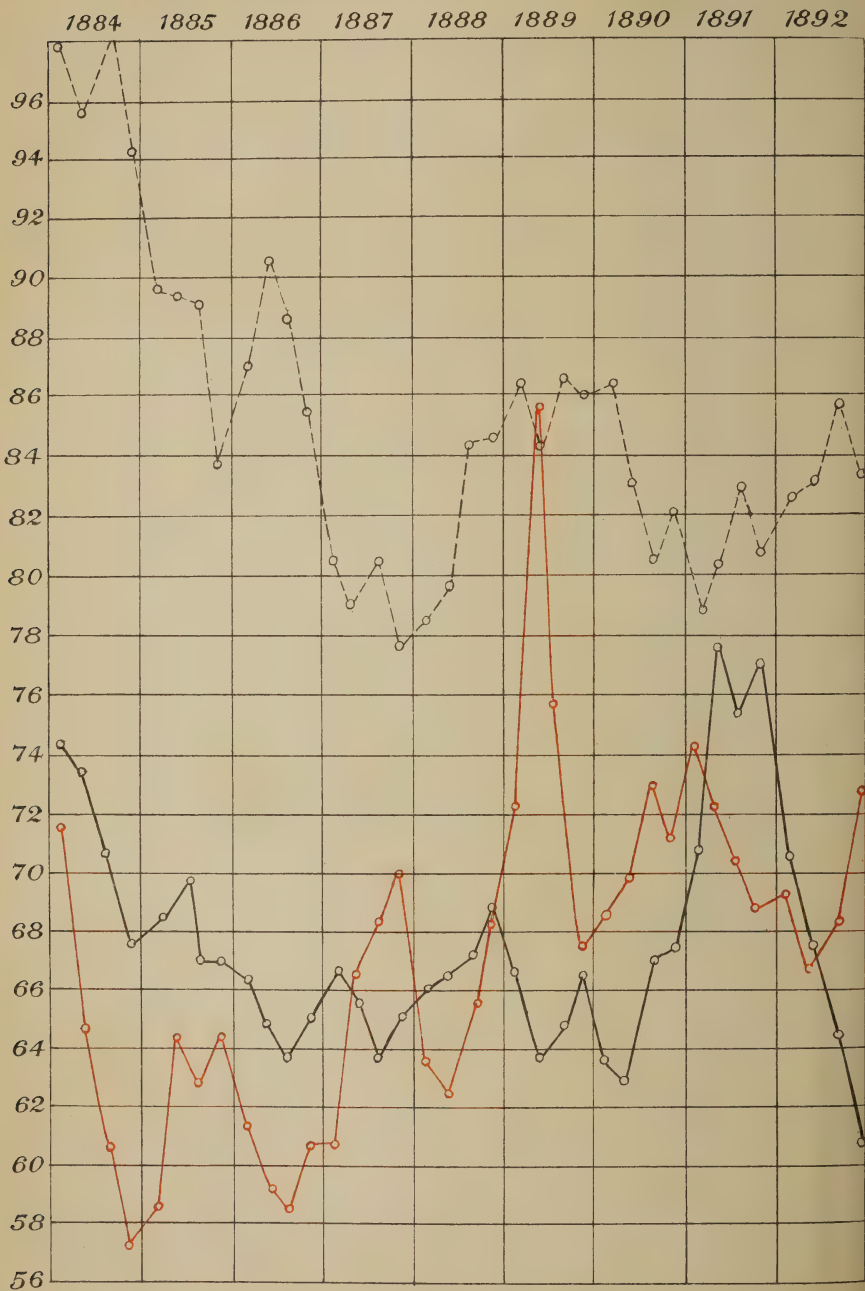
Food.

Materials.

QUARTERLY FLUCTUATIONS OF FOOD,

(1867-77=100.)

C.



—○—

Corn, etc.

- - -○- - -

Animal Food.

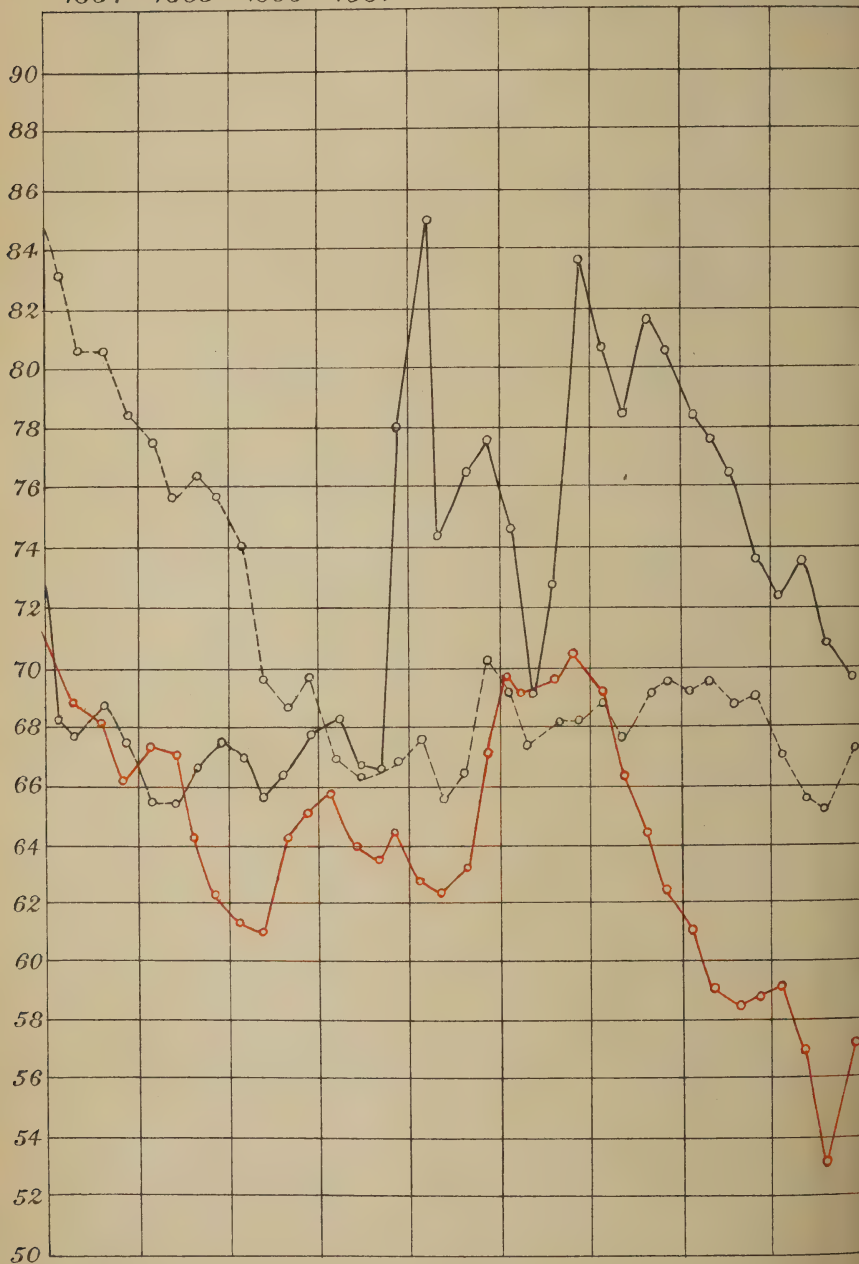
—○—

Sugar, Coffee & Tea.

QUARTERLY FLUCTUATIONS OF MATERIALS,

(1867-77 = 100.)

1884 1885 1886 1887 1888 1889 1890 1891 1892



Minerals.

Sundry Materials.

Textiles

most articles simply the prices at the end of the month, and not averages, and I therefore thought that quarterly numbers—showing the average of three such monthly quotations—would be more reliable, and by eliminating all minor fluctuations, would give a better idea of the gradual changes of all commodities, and of certain classes. I now present the following table, beginning with the year 1884, which was the first in which prices fell below the index number 80, but which may be considered a year of transition, as the low price period only commenced in 1885.

*Quarterly Movements of Prices.**
Summary of Index Numbers, 1866-77 = 100.

Years.	Quar- ters.	Vegetable Food (Corn, &c.).	Animal Food (Meat, &c.).	Sugar, Coffee, and Tea.	Total Food.	Mine- rals.	Tex- tiles.	Sundry Mate- rials.	Total Mate- rials.	Grand Total.	Silver.†
1884	I	74.4	98.7	71.7	82.8	68.1	69.8	83.8	75.3	78.4	83.8
	II	73.6	95.4	64.7	79.8	67.9	68.8	80.5	73.5	76.1	83.4
	III	70.7	99.1	60.7	79.1	68.7	68.1	80.6	73.6	75.9	83.4
	IV	67.7	94.1	57.2	75.3	67.6	66.5	78.5	71.5	73.3	82.2
'85	I	68.4	89.7	58.7	74.2	65.7	67.7	77.3	71.2	72.5	80.7
	II	69.9	89.5	64.1	76.2	65.7	67.1	75.7	70.4	72.8	81.1
	III	67.1	89.2	62.7	74.4	66.9	64.2	76.2	70.0	71.8	79.6
	IV	67.2	83.8	64.2	72.7	67.4	62.2	75.8	69.4	70.8	77.7
'86	I	66.5	87.0	61.2	72.9	67.0	61.3	74.0	68.2	70.2	77.0
	II	64.8	90.5	59.2	73.2	65.8	60.8	69.7	65.9	69.0	74.5
	III	63.8	88.8	58.3	71.9	66.4	64.3	68.8	66.8	68.9	71.2
	IV	65.1	85.3	60.9	71.6	67.7	65.2	69.6	67.7	69.4	75.8
'87	I	66.7	80.2	60.8	70.4	68.0	65.9	67.0	67.3	68.5	75.3
	II	65.4	79.0	66.8	70.7	66.8	64.0	66.5	65.8	67.8	72.2
	III	63.7	80.2	68.4	70.7	66.5	63.5	66.7	65.7	67.8	73.1
	IV	65.2	77.9	70.0	70.9	78.0	64.5	66.9	68.9	69.7	72.5
88	I	66.0	78.8	63.5	70.2	85.1	62.7	67.3	70.7	70.5	71.9
	II	66.3	79.9	62.5	70.5	74.3	62.3	65.5	66.9	68.5	69.4
	III	67.3	84.4	65.7	73.5	76.5	63.2	66.3	68.1	70.3	69.8
	IV	69.0	84.7	68.4	74.7	77.6	67.6	70.2	71.4	72.8	70.4
'89	I	66.7	86.2	72.2	75.0	74.9	69.9	69.2	70.9	72.7	70.0
	II	63.9	84.1	85.7	76.2	69.0	69.1	67.5	68.4	71.7	69.0
	III	64.6	86.8	75.7	75.1	72.6	69.6	68.1	69.9	72.0	69.8
	IV	66.3	86.0	67.2	73.1	83.9	70.7	68.1	73.2	73.2	71.4
'90	I	63.7	86.3	68.6	73.1	80.6	69.1	68.7	72.0	72.5	72.6
	II	62.8	83.0	69.8	71.6	78.3	66.7	67.8	70.3	70.8	77.2
	III	67.2	80.6	73.1	73.4	81.7	64.6	69.2	71.1	72.1	85.1
	IV	67.4	82.0	71.2	73.6	80.5	62.7	69.5	70.4	71.7	79.6
'91	I	71.0	78.9	74.1	74.5	78.4	61.2	69.3	69.2	71.4	74.4
	II	77.8	80.1	72.2	77.5	77.7	59.2	69.5	68.5	72.3	73.6
	III	75.5	83.0	70.4	77.2	76.6	58.4	68.9	67.7	71.7	74.5
	IV	77.2	80.8	68.7	76.7	73.9	58.6	69.0	67.1	71.2	72.1
'92	I	70.6	82.7	69.1	74.8	72.2	59.2	67.1	66.0	69.7	67.4
	II	67.5	83.1	66.6	73.0	73.4	57.0	65.8	65.2	68.5	65.8
	III	64.2	85.9	68.2	73.0	70.7	53.2	65.6	63.2	67.3	63.2
	IV	60.7	83.6	72.7	71.7	69.5	57.3	67.4	64.9	67.7	64.0

* The four quarterly figures of each year do not in all cases exactly (in the decimals) agree with the annual averages, as the latter are partly calculated from revised figures.

† Silver 60.84d. per oz. = 100

* The line for all commodities (Diagram A) gives a clear view of the rapid fall in the years 1884-87, the improvement at the end of 1887, and in 1888 and 1889, which however raised prices only very slightly above the 1885 level, of the year of transition, 1890, when the crisis commenced, and of the fall afterwards. Silver, though before 1888 considerably higher than commodities, experienced similar movements till the middle of 1888, when it fell below the line of commodities, still however fluctuating in a similar direction until the new United States silver legislation carried it far beyond the general level of prices. From the second half of 1891 the movements were again in the same direction, but stronger and more in sympathy with corn and materials only. Independently of the question of its demonetisation in Europe, it suffers from the great increase in production in the same way as many commodities, and from the inability of the East to take large quantities, except at low prices. Any improvement in prices of Eastern produce will also react on the exchanges, and consequently on the price of the metal, unless legislation interferes still further with its employment as money.

The comparison of the two separate lines for food and materials (Diagram B) shows that they frequently move in quite opposite directions (1885, 1886, 1887, 1889, and 1891, always in the second quarter, and in 1892 in the last quarter), until at certain points they touch each other again (1888, first quarter, 1889, last quarter). At the end of 1892 they stood wide apart, principally owing to the state of prices of animal food and of coffee, while corn, sugar, and tea were even lower than the average of materials. The high point of food in the second quarter of 1889 was merely in consequence of the great sugar speculation, and in 1891 owing to the rise in corn, caused by the failure of the French and Russian harvests.

The movements of food products (Diagram C) show a similar divergence between the prices of vegetable and of animal food, which very often move in opposite directions. This was the case early in 1885, and throughout 1886, again in the second half of 1887, while in 1888 the movements were similar. They differed in the first and last quarter, 1889, first and third quarter, 1890, first, third, and fourth quarter, 1891, first, second, and third quarter, 1892. It will be difficult to find a satisfactory explanation for this phenomenon; the simplest reason that would suggest itself would of course be that if vegetable food is cheap, people may spend more money for meat, &c., and the reverse. This may be right in the case of great movements as in 1891, but it would not explain the minor fluctuations, as retail prices do not follow wholesale prices so very closely. Years of prosperity and high wages would of course tell on the prices of animal food; for instance, 1871-74,

1880-83, 1888-89, but even here we have to handle figures carefully; from 1880-83 prices of animal food kept abnormally high, as the number of live stock in this country had so greatly diminished up to 1882, while the importation of live cattle and fresh meat gained greater importance only from 1883. Since then these large importations have gone hand-in-hand with an increase in live-stock. 1892 was exceptional, merely through the influence of high prices for pork. Corn was on a low level from the end of 1884 till the end of 1890, and after the rise in 1891, it declined 21 per cent. within the last year.

The three articles, sugar, coffee, and tea, do not fit in very well together, although they have been classed into one group, and the movement of the line does not throw much light on the course of these articles. Sugar, with the exception of the speculation in in 1889, was cheap throughout the whole period, and so was tea, the latter in fact getting gradually lower; coffee on the other hand was low in the first three years, but very high during the remaining six. The imports of coffee into Europe and North America in three periods of six years, compare as follows with prices:—

	Imports.	Good Rio.
1875-80	average 502,000 tons	s. 69 per cwt.
'81-86	" 630,000 "	44 "
'87-92	" 602,000 "	74 "

With larger supplies in the second period prices lost about 36 per cent., while with only slightly smaller imports in the third period (in 1892 more, viz., 703,000 tons but with prospects of small supplies in 1893 and 1894) prices were 68 per cent. higher. A comparison of lately ruling prices with more remote periods, for instance the forty years preceding 1867, leaves no doubt that a great change has taken place in the relative position of these three articles. Sugar and tea have become very much cheaper, the former through the extension of beet sugar and scientific improvements, the latter by the great increase in the Indian production, and possibly also by the deterioration in quality. The area whence coffee is received has not been extended, and though in Brazil the production is now much larger than it used to be, it has practically ceased in Ceylon, and has diminished in Java, while the demand must have greatly increased.

The fluctuations of materials (Diagram D) illustrate the violent speculative movement of some metals at the end of 1887 and in 1888 and 1889, of which we shall have to say a little more later on,

and a decline of 17 per cent. in the last three years; textiles show the depression in 1886, the subsequent improvement till 1889, and the fall of 19 per cent. afterwards. Sundry materials fluctuated to a smaller extent. This group is composed of a variety of articles having little in common, viz., animal products (hides, leather, and tallow), vegetable oils and mineral oil, nitrate and soda, indigo and timber, and it is curious to see that of all groups of articles the aggregate movements of this are most similar to the general average of all commodities, though less strong.

If we inquire as to the influence of certain seasons of the year on prices, the following averages will be of interest. As the year 1884 was a year of transition with falling prices, a better average will be obtained by leaving it out and taking only the eight years 1885-92, the low price period, in which the average index number fluctuated only between 72 and 68:—

Average of Eight Years, 1885-92.	Actual Average of Index Numbers 1867-77 = 100.				Percentages, 1885-92 = 100.			
	I Quarter.	II Quarter.	III Quarter.	IV Quarter.	I Quarter.	II Quarter.	III Quarter.	IV Quarter.
Vegetable food (corn, &c.)	67'45	67'30	66'68	67'26	100'42	100'19	99'27	100'13
Animal food	83'72	83'65	84'86	83'01	99'89	99'81	101'25	99'04
Sugar, coffee, and tea	66'02	68'36	67'81	67'91	97'77	101'24	100'43	100'57
Minerals	73'99	71'37	72'24	74'81	101'22	97'63	98'82	102'34
Textiles	64'62	63'27	62'63	63'60	101'71	99'59	98'58	100'11
Sundry materials	69'99	68'50	68'72	69'54	101'16	99'00	99'32	100'51
All 45 commodities	71'00	70'18	70'24	70'81	100'62	99'46	99'55	100'36

We find that for vegetable food the third quarter when the harvest begins is on the average the lowest, then follows the fourth quarter; the first is the highest, while the second shows a tendency to fall. In animal food on the other hand, the third quarter is the highest, though in summer prices should be influenced by the invariably lower prices of butter, and the last quarter is the lowest. The movements in the third and fourth quarter are therefore on the average exactly opposite to those of vegetable food, while in the first and second quarter they are similar. The movements of other articles are of less interest, as they have either no connection with seasons, or the crops are collected at different times of the year, and the movements may be accidental as in the case of sugar, where the second quarter is largely affected by the speculation in 1889. Materials however are distinctly dearer during the winter than in spring and summer, not only minerals (coals are naturally higher in winter), but also textiles and sundry materials. The totals of all commodities show the second quarter to be the lowest, then follow the third and fourth, while

the first quarter is the highest. If eight years are sufficient for drawing up such averages, the figures will show to what extent allowance has to be made in judging of movements from month to month or from quarter to quarter.

V.—*Review of the Last Seven Years.*

Most of the events that have left their impression on the course of commercial and financial affairs during the last seven years will still be fresh in the memory of those more fully acquainted with the subject, but it may nevertheless be interesting and useful, and may contribute to the better understanding of the fluctuations, to give a condensed summary of the more important occurrences which have already been partly alluded to in the preceding chapters. In my paper published by the Society in 1886, I expressed the following views as to the future:—

“It would be an enormous depreciation were we to keep the present range of prices on the average for any length of time. Possibly the decline has gone too far, and with production arrested, and with some addition to the currency during the next few years, the prospects are, if anything, rather brighter. We must, on the other hand, not forget that in the long run the addition to the currency will not be sufficient if gold is to remain the sole measure of value, and if its production does not materially increase; and that sooner or later we shall have to face fresh demands arising through the withdrawals of paper money, and possibly also from the sale of silver. We must therefore be prepared that with the usual upward and downward movements, the *average* prices of the next decades will show some further decline as compared with the average of the last eight years (1878-85).”

The index number had been 70 for the first half of 1886, and many people were rather more hopeful towards the end of the year. I shared this opinion to some extent, and expressed the belief that there was already an enormous depreciation. Nevertheless the extreme limit had not yet been reached, and prices in 1887 were on the average still two points lower. It was not till the end of the latter year that the first signs of a real improvement became visible, but the average of general prices was only raised by the French copper and tin speculations. The two following years (1888-89) were, however, distinctly better, though prices were not uniformly affected. Wheat, for instance, and indeed corn generally, thanks to the large harvests of 1887 and 1888, ruled very low in 1889. The years were, however, rich in wild speculative movements. The great tin speculation in which the price was forced up to 170*l.* collapsed in May, 1888,

when Straits dropped to 79*l.*, and copper, which for the Chili standard had been up to 106*l.* in September, 1888, and was worth still 78*l.* in February, 1889, collapsed in March together with the Société des Métaux and the Paris Comptoir d'Escompte and for a moment the price was down to 35*l.* The sugar speculation in 1889 raised the price of beet sugar from 14*s.* to 28*s.*, from which it receded again to 11*s.* in the course of the year. The activity of trade during these years was considerable, manufacturers here and on the Continent were well employed, new factories were called into existence, and the plant and machinery of the old ones were renewed and increased to cope with the requirements of improvements, of new inventions and the larger production of raw materials. The development in extra-European countries also, particularly in North and South America, in Australia and South Africa was very important. The United States extended their railways largely, and about 38,000 miles were constructed from 1886-90, or very nearly the same mileage as during the previous railway mania from 1879-83. And if trade was active and prosperous, the stock exchange did not lag behind, and the following dates are worth comparing:—

	Exports of British Produce.	London Bankers' Clearing House Returns.		Capital Created and Issued.	
		Total.	On Stock Exchange Settling Days only.	In England and in England and elsewhere, according to "Economist."	In Germany.
	Mln. £	Mln. £	Mln. £	Mln. £	Mln. £
1883	240	5,929	1,059	81	37
'84	233	5,799	961	109	45
'85	213	5,511	935	78	45
'86	213	5,902	1,199	102	48
'87	222	6,077	1,146	111	51
'88	235	6,942	1,252	160	96
'89	249	7,619	1,339	207	85
'90	264	7,801	1,417	143	66
'91	247	6,848	1,067	105	51
'92	227	6,482	1,023	81	39

These figures show an increase in the exports of British produce from 1885 to 1890 of 24 per cent., in the London Clearing House returns of 41 per cent., and in the new capital issues from 1885 to 1889 of 165 per cent. The latter were greatly stimulated by the consols conversion in 1888, and the subsequent trust company mania in 1889. Large foreign loans were brought out, enormous sums invested in all kinds of undertakings in extra-European countries, and a great number of private firms transformed into limited companies. It remains to notice the speculation in Cape

diamond shares at the end of 1887, and the inflation in South African gold mining shares in 1888 and 1889. All these shares declined heavily at the beginning of 1890, and particularly in March, causing very large losses to speculators.

The average index number of prices had increased from 68 in 1887 to 70 in 1888, and 72 in 1889, and the highest point was reached in November and December, 1889 (73·7), when iron and merino wool were at their best. A reaction followed early in 1890, and in the first part of the year great fears were entertained as to the effect of the McKinley tariff, which was almost prohibitive to European manufactures, but many industries still kept up a feverish activity in order to send a large supply of goods to the United States before the new tariff came in force (1st October). The American Silver Bill was introduced in February, and legalised in July, coming in force in August. It increased the purchases from \$2,000,000 (gold value), or between $2\frac{1}{4}$ and $2\frac{1}{2}$ million fine ounces monthly, to $4\frac{1}{2}$ million fine ounces monthly, and as a large stock had been bought by speculators, the price advanced from 44*d.* early in the year to 54 $\frac{5}{8}$ *d.* in August. But the production of silver increased largely, the accumulated stocks had to be disposed of, and the extended purchases were therefore inadequate to keep up its price. Towards the middle of the year the difficulties of the Argentine government, after years of reckless finance, became more apparent, and the outbreak of the revolution at Buenos Ayres in July, and the overthrow of the Celman administration, were the precursors of the coming storm. Argentine securities declined heavily, but nevertheless things still went on smoothly for a short time. In August and September there was considerable monetary stringency in New York, to be followed by a great fall of American railway securities in London in October, and by the collapse on the New York stock exchange early in November. The Bank of England, foreseeing difficulties, borrowed 3,000,000*l.* gold from the Bank of France, and 1,500,000*l.* from Russia, in order to strengthen its reserve and to alleviate any possible stringency. On the 14th November the old firm of Baring applied to the Bank of England for assistance. This is usually called the Baring crisis, which considering the great mercantile business and the enormous acceptances of the firm, amounting to 21,000,000*l.*, might have been of the most serious consequences, and even worse than that of 1866, had it not been happily met by the prompt action of the bank, and the arrangement of a guarantee fund for the liabilities of the firm. The 19th November was the worst day on the stock exchange, many rumours were afloat even about the most solvent firms, and stocks were largely thrown on the market. There was also a great fall of prices of securities in

Paris and Berlin. The Bank of England was, however, lending freely, a committee was formed to inquire into Argentine affairs, which later on settled the much criticised funding scheme (March, 1891), and the storm gradually abated.

Trade had become worse not only under the pressure of the financial difficulties, but as a natural reaction from a period of prosperity in which everything had been overdone. In 1891 the European export trade suffered greatly from the effects of the new American tariff, from the shrinkage of the South American demand, the fall of silver, and the unsatisfactory conditions of business in the East. Affairs in Argentina and Uruguay went from bad to worse. Provinces, corporations, and a number of banks failed, and the premium on gold at Buenos Ayres went up to 323 in June (423 paper dollars for 100 gold). There was in addition the civil war in Chili, until the defeat of Balmaceda at the end of August, the crisis in Portugal in May and July, and the consequent reduction of the interests on the Portuguese debt, difficulties in Spain, the crisis in Brazil (in November), and the extensive failures of building, banks, and town property financing companies in Australia. The most important event of the year, however, bar the great losses of investors, was the failure of the French and Russian crops, and the famine in Russia, simultaneous with a large American harvest, which latter gave a fresh impetus to speculation in American rails. Corn rose considerably, and in Berlin rye ruled even higher than wheat in October. Materials on the other hand fell heavily. The production⁵ had been greatly increased, and of cotton and wool particularly, the large quantities had to be forced into consumption at a time of general stagnation and lack of enterprise at constantly falling prices. The decline,

⁵ Production of iron, cotton, and wool:—

	Iron. — Production of United Kingdom, United States, and Germany only.	Cotton. — Total Supply in Europe and North America per Season.	Wool. — Supply of Colonial and River Plate only, per Season.
	tons	bales	bales
1883.....	16,594,000	9,409,000	1,603,000
'84.....	15,511,000	8,267,000	1,668,000
'85.....	15,146,000	7,594,000	1,684,000
'86.....	16,221,000	8,549,000	1,814,000
'87.....	18,001,000	9,079,000	1,786,000
'88.....	18,826,000	9,134,000	1,978,000
'89.....	20,451,000	9,314,000	2,116,000
'90.....	21,765,000	9,969,000	2,016,000
'91.....	20,306,000	10,869,000	2,385,000
'92.....	20,750,000	11,059,000	2,536,000

however, was counterbalanced by the rise of corn, and the index number of prices remained unchanged. The general commercial depression continued with unabated force in 1892, and an agricultural depression was added. This country was particularly unfortunate, as in conjunction with declining values of corn the harvest was a bad one, and as cattle had to be slaughtered and sold at excessively low prices. Of other causes unfavourably affecting trade, we may mention the great coal strikes in Durham and in Germany, the labour riots in the United States, and the great cotton strike in Lancashire only just settled, the outbreak of cholera on the continent, the collapse of a number of building societies in London, the crisis in Australia, and the uncertainty of the future of silver.

Of political events seriously interfering with trade during the epoch under review there were none; peace was maintained in Europe, though it may have been an armed peace.

The *average* prices of the seven years were as expected and, as already previously recorded, distinctly below the average of the preceding decades; but there is one point which on a close comparison of the tables may nevertheless afford some consolation if not satisfaction. The increase in production from 1879 to 1883 was very large indeed, and prices declined heavily from 1880 to 1887, but although in the last five or seven years there was again a very great increase in production, and although some commodities have been even cheaper than in 1886 or 1887, still the average of all commodities has not sunk materially below the 1887 level. It would therefore appear that the effect of quantities on general prices has in the latter period been rather less decisive than in the former.

VI.—*The Causes of the Fall and the Monetary Question.*

The general causes that have contributed to the fall of prices as compared with the period from 1867-77 (or with the twenty-five years from 1853-77 which is equivalent) and up to 1886 had been stated in my first paper as follows:—

“1. Reduction of the cost of production and conveyance of some large articles of consumption by the opening of the Suez Canal, by the increase of steamers, and by the enormous extension of railways and telegraph lines, especially in extra-European countries. The opening of new sources of supply. In consequence of these causes, great increase in production.

“2. Alterations in currencies, demonetisation of silver, and “insufficient supply of gold.”

It would go far beyond the limits of this short paper to enter more fully into these questions, and it would require almost a

repetition of a great deal that has previously been said; I must, therefore, take for granted that the detailed proofs then brought forward are still remembered or will be referred to, and must confine myself to stating the main features. I ascribed the greater influence to the second cause. The increase in production had indeed been very large, but I showed that in former periods it had been similar—at least proportionately from one period to another. In fact the development from 1850 to 1873 and the growth of wealth were quite phenomenal, as can be easily shown by only looking at the trade of this country and the returns of the income tax, but while at that period the circulation of money expanded simultaneously with the production of commodities, it was possible to maintain on the whole a certain price level for about twenty-five years. From 1870 or 1873 to 1885 the monetary circulation of Europe, United States and Australia, or what we may call the principal gold using countries, had not much if at all increased, silver had been demonetised in some countries, and its total circulation only moderately increased by coinages in others, while the additions of gold had been smaller than before 1870, and had only served to replace withdrawn silver and notes (Germany and Scandinavia), or to increase the reserves against notes largely issued uncovered, or with forced currency (France, United States, Italy, Austria, Russia).

If the quantity of money stands in any connection with prices—and I suppose there are few, if any, people who will entirely deny it—this insufficient increase, in view of the further great advance in production must have told on prices. It is often said there is enough money in the country, or there is enough to carry on the trade of the world, but this presupposes a fixed quantity which need not be enlarged with the increase of population and their products. There is certainly enough to do the work, and we could even do with less; it all depends on prices. There is no "scarcity" of gold in the strict sense of this word, which should never have been used, and which has caused a great deal of misunderstanding, but there is an insufficiency of supply to maintain a certain average range of prices to which we have been accustomed. There will, of course, always remain the ordinary up and down movements according to supply and demand, and influenced by the extension and contraction of credit, by confidence and distrust. A fall in prices, if not caused by political or financial disturbances, is generally due to an increase in production larger than is warranted by the natural increase of consumers, for if there were no such increase there would be no cause for a fall. But the lower prices afterwards stimulate consumption, and if the quantity of money increases, prices rally, and even the larger

quantities can be sold at former prices. Such was the case from 1850-73 as already mentioned.

During the last seven years, the period now under review, the first cause, extension of the new sources of supply and increase of production, was again at work, and has already been frequently referred to. It remains still to examine the monetary question.

The production of the precious metals since the commencement of the century is stated in the following table (1801-85 according to Mr. Soetbeer, from 1886-92 according to the Director of the Mint in Washington):—

Production of the Precious Metals.

	Average Annual Production.			Value of Average Annual Production.*			
	Gold.	Silver.	Pro- portion of Quantities. Gold to Silver.	Gold.	Silver.	Silver at Average London Price.	Total.
	Kilos.†	Kilos.†		Mln. £ and dec.	Mln. £ and dec.	Mln. £ and dec.	Mln. £ and dec.
1801-10	17,778	894,150	1 : 50·3	2·43	7·88	—	10·31
'11-20	11,445	540,770	1 : 47·2	1·56	4·76	—	6·32
'21-30	14,216	460,560	1 : 32·4	1·94	4·06	—	6·00
'31-40	20,289	596,450	1 : 29·4	2·77	5·25	—	8·02
'41-50	54,759	780,415	1 : 14·3	7·48	6·87	—	14·35
'51-55	199,388	886,115	1 : 4·4	27·20	7·81	—	35·01
'56-60	201,750	904,990	1 : 4·5	27·60	7·97	—	35·57
'61-65	185,057	1,101,150	1 : 6·0	25·30	9·70	—	35·00
'66-70	195,026	1,339,085	1 : 6·9	26·60	11·80	—	38·40
'71-75	173,904	1,969,400	1 : 11·3	23·80	17·30	16·80	40·60
'76-80	172,434	2,450,300	1 : 14·2	23·60	21·60	18·70	42·30
'81-85	154,959	2,808,400	1 : 18·1	21·20	24·70	20·60	41·80
1886	159,700	2,902,000	1 : 20·6	21·70	25·50	19·10	40·80
'87	159,200	2,990,000		21·70	26·30	19·30	41·00
'88	165,800	3,386,000		22·60	29·80	21·00	43·60
'89	185,800	3,902,000		25·40	34·40	24·10	49·50
'90†....	170,200	4,144,000	1 : 24·4	23·20	36·50	28·60	51·80
'91†....	181,300	4,493,000		24·80	39·60	29·30	54·10
'92†....	196,800	4,730,000		26·90	41·70	27·30	54·20

* Value of gold at 136·567*l.* per kilo. fine, of silver in the first column at the uniform ratio of 1 gold to 15½ silver, or at 8·811*l.* per kilo. fine; in the second column at average London price from the time that the old ratio was no longer in force. The ratio of value between gold and silver after 1870 was as follows : 1871-75 = 1 : 16, 1876-80 = 1 : 17·9, 1881-85 = 1 : 18·6, 1886-90 = 1 : 21·1, 1891 = 1 : 20·9, 1892 = 1 : 23·7.

† In kilogrammes fine metal, one kilogramme equal to 2·2046 lbs. avoirdupois, or to 32·15 ozs. fine, 35·07 ozs. standard gold ($\frac{22}{240}$ fine), and 34·76 ozs. standard silver ($\frac{22}{240}$ fine).

‡ Production of gold from 1890-92 without China. In his new report the Director of the Mint has not included the usual figures for China, as there does not appear to be sufficient proof that gold is really produced in quantities in that country. He has, however, left the figures prior to 1890 unchanged, and the comparison is therefore not precise. The quantities for China included in the figures prior to 1890 are as follows:—

1881-85	10,880 kilos.	1,491,000 <i>l.</i> value	1888	13,500 kilos.	1,840,000 <i>l.</i> value
1886	15,800 "	2,160,000 "	'89	13,500 "	1,840,000 "
'87	14,300 "	1,950,000 "			

The production of gold has of late made satisfactory progress, mainly due to the discoveries in Transvaal since the middle of 1886, where the production already amounts to 4,500,000*l.*, with very fair prospects of further considerable development. The production of silver shows an enormous increase, and even last year there was again an addition according to the provisional figures of the Director of the Mint, notwithstanding the assertion of many people that a number of mines had been closed on account of the low price. The increase in production of the more important commodities from 1886 has been very large, particularly of sugar, cotton, wool, iron, coals, and copper, but in no case to my knowledge has the addition been so enormous as in silver, where it amounted to over 60 per cent. within six years.

For gold there was a great extra demand during the last year or two from Austria and Russia. The former is now introducing a gold standard, while the latter is accumulating a large stock of gold, apparently not for currency reforms but possibly for political reasons. The bank of France has also considerably increased its reserve of gold (from about 50,000,000*l.* in March, 1886, to 66,000,000*l.* in March, 1893), and Germany and Australia have added to their stocks, but these additions may have been balanced by losses of Italy, Spain, Portugal, and lately the United States. As extra demands we have only to consider the quantities for Austria and Russia, as these, standing against paper money, do not increase the monetary circulation. We can now make the following calculation:—

	£	
Production of gold from 1886-92	166 millions	
Deduct: used in the arts and manufactures in Europe and	£	
North America, fully 12 millions annually according to	84	
the best authorities		
Requirements of the East, of Africa, and South America,		
about 3,000,000 <i>l.</i> per annum on the average (from 1888-90		
the requirements were much larger, but during the last	21	
two years considerable quantities have been returned to		
Europe)	say =	
	— 105	„
Available for monetary purposes in Europe, United States,		
and Australasia.....	61	„
Extra requirements—	£	
By Austria, increase from 6 to 26 millions.....	= 20	
„ Russia, „ 35 „ 75 „	= 40	
	— 60	„
Balance for other countries	1	„

There was consequently scarcely any gold available for other countries if the above calculations are fairly correct, but there were the following considerable additions of silver money during

the same period, and here we have more reliable data, as the money coined does not go in the melting pot on account of the depreciation of the metal. Additions of silver money :—

Austria, legal tender	£ 8 millions
Spain	9 "
England and other European countries, token money, about....	6 "
United States, ⁶ legal tender dollars and bullion	60 "
	<hr/>
	83 "
	<hr/>
	"

As we have deducted the total additions of gold in Austria and Russia, we have however to take also account of the increase in the note issue; this was as follows in these countries, and in Spain, which has lost gold, and where it is now at a premium :—

	£	£	£
In Austria, total issue from 35 to 45 millions = 10 millions			
„ Russia „ „ 90 „ 110 „ = 20 „			
„ Spain, uncovered issue „ 13 „ 22 „ = 9 „			
		<hr/>	
		39 „	
		<hr/>	
		„	

We therefore find by adding the various figures—and provided that the calculation is approximately correct—that there was an addition to the currency of Europe, United States, and Australia of about 123 million £. While I maintain that from 1870 or 1873 to 1885 there cannot have been any or only a moderate increase in the total circulation, there was during the last seven years a satisfactory increase of about 17,500,000*l.* per annum. Supposing that the total circulation in the countries named has of late amounted to between 1,350 and to 1,500 million £,⁷ the annual addition

			Mln. \$
⁶ United States. Legal tender dollars. 1st January, 1893			417·9
„ „ „ 1st January, 1886			222·9
			<hr/>
	Hence increase.....		195·0
„ Bullion against which new legal tender } notes issued, 1st January, 1893			99·8
			<hr/>
	Total increase		294·8

or 60,000,000*l.*

⁷ Mr. Ottomar Haupt gives the following estimate of the circulation of Europe, United States, and Australia at the beginning of 1892 :—

	£
In gold coin and bullion	707 millions
„ silver legal tender coin and bullion	337 "
„ „ token money	102 "
„ uncovered paper money and notes	342 "
	<hr/>
	1,488 "
	<hr/>

To this has to be added for 1892 13,000,000*l.* gold and 10,000,000*l.* legal tender

though not equal to the increase in the production of commodities has still been considerable, and greater than the increase in population, and this may perhaps partly account for the fact noticed in the previous chapter, that prices have not gone materially lower than in 1887. The second cause, therefore, alteration of currencies and insufficient supply of gold, has apparently not had any *additional* influence on prices since 1887.

The question now to be asked is, what will be this influence in the immediate future? The quantity of gold available for monetary purposes in Europe, the United States, and Australia amounts now to about 12 million £ annually, and may soon be somewhat larger with the expected increase in South Africa, and with 9—10 million £ silver—being the present value if the United States should continue to buy 54 million fine ounces annually—the supply of money would be ample for the expansion of trade; but new requirements will naturally arise. Austria wants still 11—12 million £, or even more, and Russia is said to have the command of some 12—15 million £ gold standing to her credit abroad; while Spain and Portugal, Italy, Greece, and South America will also want some gold by and by. The result is that the supply will again be insufficient for some time to come if trade continues to expand at the usual rate.

The silver question remains in an acute state, and the position is worse than ever, as with the present restricted demand the silver. All such estimates have of course to be taken with some reserve, but Mr. Haupt is well known for his great experience in monetary matters, and for the trouble he has bestowed on the collection of his figures. Making however allowance for the fact that it is almost impossible to arrive at reliable estimates in some countries, particularly in the Latin union, and as it is quite possible that the American government over-estimates the quantity of gold in circulation in the States, I think that the following figures of the circulation at the beginning of 1893 would cover the limits of error:—

	£	£
In gold coin and bullion	620—	720 millions
„ silver legal tender coin and bullion	300—	350 „
„ „ token money	100—	110 „
„ „ uncovered paper money and notes .	300—	350 „
	<hr/>	<hr/>
	1,320—	1,530 „

The total quantity of gold and silver bullion and coin in the world may be roughly estimated as follows:—

	Gold. £	Silver. £	
Europe, United States, and Australasia	670 mlns.	430 mlns.	{ silver at nominal value.
Other gold using and silver using countries	100 „	350 „	{ Silver at present value.
	<hr/>	<hr/>	
Total	770 „	780 „	

quantities are getting almost unwieldy. The monetary conference at Brussels was practically a failure. Great Britain declared from the outset that she would not change her gold standard, and Germany, Austria, and also other countries have apparently lost all belief that a universal bimetallic agreement can ever be effected. It seems that the existing prejudice in favour of gold cannot be overcome; the fight for the yellow metal continues, and whoever can get it holds it with a firm hand. Any other plan to improve matters was hardly seriously discussed, and Mr. Alfred de Rothschild's proposal was quickly withdrawn. It remains now to be seen what the United States will do. Will they be able to maintain their purchases at the present rate? I think not, as they are evidently in excess of actual requirements, and cause gold to leave the country. They might perhaps do with half the quantity, judging from the experience of the last two years; but if they want to keep a sufficient reserve of gold and to maintain the parity between the two metals, they will for the other half have to sell bonds (if there is not sufficient surplus revenue) in order either to obtain gold or to withdraw old legal tender notes, of which some 40 million £ are still uncovered. In this case it would be simply issuing one thing in place of another without adding to the general circulation of the world. It is not likely that they will stop their purchases altogether, but if they should decide to reduce them, it would be best to do so gradually in order to disturb the exchanges as little as possible. If they, on the other hand, continue their purchases at the present rate, it is only a question of time when silver will be largely preponderating in the currency of the country, and in the general interest of the world it would perhaps be best if they would openly adopt a silver standard. The remainder of America would probably follow their example, and silver would again reign over a large surface of the world. This would not prevent the fluctuations of the price of silver, but it would certainly make the exchanges much more steady.

Whatever the outcome may be, it is to be hoped that the British Government will not adopt the advice of the Indian Currency Association to interfere with the free coinage of silver in India. It would create a nominal standard of very doubtful value to the country, and would disturb the exchanges and the very large trade between India and other silver using countries. Silver would fall considerably in the open market. The natives, who are accustomed to hoard rupees or to work them up into ornaments, would be able to buy bars cheaper; this would throw distrust on the coinage of the country, and the hoarded coins would probably be exchanged against silver bars, or still more

likely against gold, thus increasing the actual circulation of rupees and depressing their value. A greater mint charge would also not help much; the market price would fall to the extent of the difference, or at best the difference would be divided, the rupee rising and the market price falling to a similar extent, and then the fluctuations would be just the same as before, only with the constant difference of the mint charge between rupees and bars. Otherwise the measure will have the same defects as the total stoppage of coinage, creating in place of a sound metallic basis a nominal standard, a coin similar to paper money, which cannot be exported. To fix the gold value of the rupee effectively is equivalent to the introduction of a so-called "limping" gold standard. It is only possible with a certain reserve of gold, which would have constantly to be increased, keeping the silver rupees at a nominal value. The sale of the enormous stock of silver is out of the question, as it would scarcely have a price. The United States and India take now about two-thirds of the total production, and if they both should cease to buy, the fall would be so great that it is very questionable whether even the other silver countries would be able to continue using the white metal. The demand for gold, on the other hand, would largely increase, causing a fresh fall in prices, and depreciating the value of Indian export produce. There is no doubt that the fluctuations of exchanges and the fall of silver are very inconvenient to Anglo-Indians, to the Indian Government, and to traders with India; but nobody has ever proved that it has been an evil to the natives and the country itself. In case of a fresh fall the Indian Government must find means to increase the revenue, and in case of need it must be temporarily assisted by the mother country, particularly in the case of pensions, in which it may be said Great Britain is in honour bound to prevent a further depreciation.

Half the money of the world is still in silver, we cannot do without it, and it should therefore not be boycotted. The worst is, that under present conditions even countries with paper money, if in a position to return to cash payments, will not take much silver. Russia, with a large and poor population, and also the South American States when their finances improve, might absorb large amounts, but silver would be comparatively dearer than gold, that is to say, any extra demand would at once raise the price of silver considerably, while it would decline again when the requirements are filled. Means should be found to assist the United States in their efforts to maintain the use of the metal, and if they are unwilling to continue their purchases to the whole extent, the European countries ought to make an agreement to take a portion for some time, say for ten years, until the tendency

of production is better known. It is quite possible that by that time some important mines may be exhausted, and that the production will return to a more reasonable figure if only to that of some six years ago, and then silver can be left to itself. Should on the other hand production remain the same or still further increase, it will be impossible for the countries with a gold standard to help in the matter, and prices will have to go still lower until the production is arrested.

VII.—*Conclusion.*

This paper would be incomplete were we not at the end of our remarks to refer to the immediate prospects and to the future of prices. The production of commodities appears to be arrested now, iron and coals have already been stationary, and will probably not increase unless wanted, sugar and wool promise to be stationary this year, while coffee, and particularly cotton, will show a large reduction. There were similar conditions noticeable in 1885 and 1886, and a comparison of the movements of materials in 1890, 1891, and 1892, with those in 1884-86, shows a striking similarity. But on the other hand the latter period had already been preceded by a year of drooping prices. The years 1880-82, whatever the state of prices may have been, were undoubtedly good business years, not only in this country, but also in the States and in Germany; the year 1883, however, was less favourable, the effect of the greatly expanded production made itself felt, and prices declined gradually, falling rapidly from 1884 to 1887. It would therefore perhaps be more to the point to compare 1890-92 with 1883-85; production was arrested in 1885 and 1886, and business improved somewhat at the end of 1887, and to a greater extent in 1888. It would, however, be futile to speculate according to these similarities when the turn for the better may arrive, as conditions may be similar, but are never quite alike. At present there are no signs yet to be observed of any real improvement in the great industries of the world and in general commerce. After a great deal of overtrading and overfinancing, the losses on investments, in commerce, and agriculture have been enormous, and some years may still elapse before an important improvement will take place; but much unsoundness has been cleared, and with production arrested, a more healthy tone may set in, and some improvement in certain branches may perhaps not be very distant.

A serious curtailment in the use of silver, on the other hand, though it does not seem probable that anything will be done this year, will naturally depress its price, and any sudden change will have a disastrous effect on Eastern trade, and hence on trade generally.

The average prices of the next decade may still keep low, or may even show some further decline as compared with the last seven or ten years, if gold remains the sole measure of value, and if the production of commodities again increases. That this production, generally speaking, should remain stationary for any length of time is of course impossible, as with the increase of population there will be more hands to work and more mouths to be fed. A decrease is sometimes caused by great wars such as may have been the case early in the century, but a rise in prices owing to declining production would certainly be a much greater misfortune than the present fall, as quantities and not prices keep people employed. The range of prices if once established for any length of time is immaterial, it is only the transition which is injurious, as it dislocates the position between debtor and creditor. As most producers are debtors, they have naturally suffered by the decline, not only individuals but whole nations, and indebted countries have added to their liabilities, and but few have been able to maintain their metallic circulation. The output and exports had to be increased to make good the fall of prices. The production may however go into different channels. In the first development of new countries the settlers take up principally certain large agricultural products such as wheat, maize, cotton, wool, &c., then comes the mining industry, but with the increase of population and their requirements, the production will also become more variform, more of the food will be consumed there, and a time may come when the shipments of certain commodities will no longer be so excessive as they are now.

APPENDIX.

Construction of the Tables.

The Table of *Index Numbers* is based on the average prices of the eleven years 1867-77, and the index numbers have been calculated in the ordinary arithmetical way; for instance, English wheat:—

	<i>s. d.</i>	
Average, 1867-77	54 6 = 100, average point.	
„ '55	74 8 = 137, or 37 per cent. above the average point.	
„ '92	30 3 = 56 „ 44 „ below „	

The index numbers therefore represent simple percentages of the average point.

Certain articles which appear to have something in common have been grouped together, with the following result:—

		Example for 1892.	
		Total Numbers.	Average.
1. Vegetable food, corn, &c. (wheat, flour, barley, oats, maize, potatoes, and rice)	With 8 Index Nos.	523	65
2. Animal food (beef, mutton, pork, bacon, and butter).....	„ 7 „	586	84
3. Sugar, coffee, and tea	„ 4 „	278	69
1—3. <i>Food</i>	„ 19 „	1,387	73
4. Minerals (iron, copper, tin, lead, and coals)	„ 7 „	500	71
5. Textiles (cotton, flax, hemp, jute, wool, and silk)	„ 8 „	452	57
6. Sundry materials (hides, leather, tallow, oils, soda, nitrate, indigo, and timber)	„ 11 „	732	67
4—6. <i>Materials</i>	„ 26 „	1,684	65
<i>General average</i>	„ 45 „	3,071	68

The *general average* is drawn from all 45 descriptions (from 1846-66 only 43, from 1867-72 only 44), and is the simple arithmetical mean as shown above. All the 45 descriptions of commodities are treated as of equal value, the more important articles

however being represented by more than one index number, viz., wheat (with flour) by three; beef, mutton, pork (with bacon), sugar, iron, coals, cotton, wool and hides (with leather), by two numbers each. Where it was supposed that one quotation would not sufficiently represent the commodity, two quotations were taken, and the index number was calculated from the mean of both, viz., in the case of coffee, tea, flax, hemp, merino wool, hides, tallow, linseed oil, and timber.

All articles have been calculated at their actual prices, and no correction has been made for extraordinary fluctuations. The extreme prices of cotton during the American war raised the general average considerably, but by the test of quantities—according to the importance of each article—I find that the index number for all commodities of 105 in 1864 is quite exact.

The index numbers of years before 1846, calculated from the average prices of the 31 principal commodities, the descriptions corresponding as nearly as possible with those since 1846, are as follows (1818-20 reduced to the gold standard, 1867-77 = 100):—

1818.....	142	1825	117	1832	89	1839.....	103
'19.....	121	'26	100	'33	91	'40.....	103
'20.....	112	'27	97	'34	90	'41.....	100
'21.....	106	'28	97	'35	92	'42.....	91
'22.....	101	'29	93	'36	102	'43.....	83
'23.....	103	'30	91	'37	94	'44.....	84
'24.....	106	'31	92	'38	99	'45.....	87

Wheat Harvest in the United Kingdom.—1849-78, according to Sir James Caird's estimates; 1879-83, according to the "Times;" from 1884, according to official returns; 1849-83, on the basis of an average harvest of 28 bushels per acre equal to 100; from 1884, an average of 29 bushels per acre equal to 100, as it is probable that, owing to the reduction in the acreage, inferior land has gone out of wheat cultivation and the average yield has increased.

Average Prices of Commodities.*

No. of Article }	0	1	2	3	4	5	6	7	8	1-8	9
		Wheat.		Flour.	Barley.	Oats.	Maize.	Potatoes.*	Rice.	Vegetable Food.	Beef †
Year.	Silver. ‡	English Gazette.	American.	Town Made White.	English Gazette.	English Gazette.	American Mixed.	Good English.	Rangoon Cargoes to Arrive.	Total.	Prime.
	d. per oz.	s. and d. per qr.	s. and d. per qr.	s. per sack (280 lbs.).	s. and d. per qr.	s. and d. per qr.	s. per qr.	s. per ton	s. and d. per cwt.		d. per 8 lbs.
78.....	52 ⁹ / ₁₆	46·5	48	38	40·2	24·4	25	155	10	—	61
79.....	51 ¹ / ₄	43·10	48	36	34	21·9	23 ³ / ₄	130	9·7	—	55
80.....	52 ¹ / ₄	44·4	51	39	33·1	23·1	25 ¹ / ₄	130	9·1	—	58
81.....	51 ¹ / ₁₀	45·4	52	40	31·11	21·9	27 ³ / ₄	85	8·4	—	56
82.....	51 ³ / ₈	45·1	48·6	40	31·2	21·10	31	95	7·5	—	60
83.....	50 ⁹ / ₁₆	41·7	45	36	31·10	21·5	27 ³ / ₄	105	8·1	—	61
84.....	50 ¹ / ₁₆	35·8	36·6	31	30·8	20·3	25 ¹ / ₄	75	7·8	—	58
85.....	48 ³ / ₈	32·10	35	29	30·1	20·7	23	75	7	—	52
86.....	45 ³ / ₈	31	35	28	26·7	19	21	80	6·7	—	49
87.....	44 ³ / ₈	32·6	34	28	25·4	16·3	21 ¹ / ₄	85	6·10	—	43
88.....	42 ⁷ / ₈	31·10	37	30	27·10	16·9	23 ¹ / ₂	80	7·1	—	48
89.....	42 ¹ / ₁₆	29·9	35	29	25·10	17·9	20	80	7·3	—	47
90.....	47 ¹ / ₁₆	31·11	35·6	29	28·8	18·7	20	70	7·3	—	47
91.....	45 ¹ / ₁₆	37	40	33	28·2	20	28	92	7·11	—	47
92.....	39 ¹ / ₁₆	30·3	33	28	26·2	19·10	21 ³ / ₄	70	7·8	—	47
verage											
83-92	45 ³ / ₄	33 ¹ / ₂	36 ¹ / ₂	30	28	19	23	81	7 ¹ / ₄	—	50
78-87	50	40	43 ¹ / ₂	34 ¹ / ₂	31 ¹ / ₂	21	25	102	8	—	55 ¹ / ₂
67-77	58 ¹ / ₄	54 ¹ / ₂	56	46	39	26	32 ¹ / ₂	117	10	—	59

Index Numbers (or Percentages) of Prices, the Average of 1867-77 being 100.

78.....	86·4	85	86	83	103	94	77	132	100	760	104
79.....	84·2	80	86	78	87	84	73	111	96	695	93
80.....	85·9	81	91	85	85	89	79	111	91	712	98
81.....	85	83	93	87	82	84	85	73	83	670	95
82.....	84·9	83	87	87	80	84	95	81	74	671	102
83.....	83·1	76	80	78	82	82	85	90	81	654	104
84.....	83·3	65	65	65	79	78	78	64	77	571	98
85.....	79·9	60	62	63	77	79	71	64	70	546	88
86.....	74·6	57	62	61	68	73	65	69	66	521	83
87.....	73·3	60	61	61	65	63	65	73	68	516	73
88.....	70·4	58	66	65	71	64	72	69	71	536	81
89.....	70·2	55	63	63	66	69	61	69	72	518	80
90.....	78·4	59	63	63	73	72	61	60	72	523	80
91.....	74·1	68	71	72	72	77	86	79	79	604	80
92.....	65·4	56	59	61	67	76	67	60	77	523	80

* The annual prices are the averages of twelve monthly or fifty-two weekly quotations; prices of eight monthly quotations, January to April and September to December.

† Index numbers of silver as compared with 60·84d. per ounce being the parity between gold and silver at 1 : 15¹/₂; not included in the general average.

‡ Meat (9-13), by the carcase, in the London meat market.

Average Prices of Commodities—Contd.

No. of Article }	10	11	12	13	14	15	9—15	16A	16B	17	18A*	18B
	Beef.	Mutton.		Pork.	Bacon.	Butter.		Sugar.			Coffee.	
Year.	Mid- dling.	Prime.	Mid- dling.	Large and Small, Average.	Water- ford.	Fries- land, Fine to Finest.	Animal Food. Total.	British West Indian Refining.	Beet, German, 88 p. c., f.o.b.	Java, Floating Cargoes.	Ceylon Planta- tion, Low Mid- dling.	Rio de Janei- ro Chan- del
	d. per 8 lbs.	d. per 8 lbs.	d. per 8 lbs.	d. per 8 lbs.	s. per cwt.	s. per cwt.		s. per cwt.	s. per cwt.	s. per cwt.	s. per cwt.	s. p cw
1878.....	49	68	55	50	74	122	—	20	21½	25	101	6½
'79.....	45	64	52	48	72	107	—	19	21¼	24	90	5½
'80.....	49	66	54	55	76	125	—	20½	21½	25½	87	6½
'81.....	48	69	57	54	76	123	—	21¼	22	26½	80	4½
'82.....	51	72	60	51	74	125	—	20	21½	25½	65	3½
1883.....	51	73	61	49	72	123	—	19	20¼	24½	76	4½
'84.....	49	64	53	48	70	120	—	13¼	13¼	17½	62	4½
'85.....	44	56	47	45	68	111	—	13½	14¼	17½	60	3½
'86.....	40	62	50	45	67	100	—	11¾	11¾	14¼	68	4½
'87.....	36	52	42	43	61	103	—	11¾	12½	14½	90	7½
1888.....	39	58	47	40	61	100	—	13	13¾	16	80	6½
'89.....	39	63	50	43	66	102	—	16	16½	19	95	7½
'90.....	38	59	45	42	62	100	—	13	12½	15¼	101	8½
'91.....	40	53	42	39	63	106	—	13½	13½	15½	101	7½
'92.....	38	53	42	48	68	108	—	13½	13¾	16	104	6½
Average												
1883-92	41½	59	48	44	66	107	—	13¾	14¼	17	84	6½
'78-87	46	64½	53	49	71	116	—	17	18	21½	78	5½
'67-77	50	63	55	52	74	125	—	23	24	28½	87	6½
Index Numbers (or Percentages) of Prices, the Average of 1867-77 being 100.												
1878.....	98	108	100	96	100	98	704	88	88	88	116	9
'79.....	90	102	95	92	97	86	655	86	84	84	103	9
'80.....	98	105	98	106	103	100	708	89	89	89	100	9
'81.....	96	109	104	104	103	98	709	92	93	93	92	7
'82.....	102	114	109	98	100	100	725	87	89	89	75	6
1883.....	102	116	111	94	97	98	722	84	86	86	87	6
'84.....	98	102	96	92	95	96	677	56	62	62	91	7
'85.....	88	89	85	87	92	89	618	59	62	62	69	6
'86.....	80	98	91	87	91	80	610	50	50	50	78	7
'87.....	72	83	76	83	82	82	551	52	51	51	104	12
1888.....	78	92	85	77	82	80	575	57	56	56	92	10
'89.....	78	100	91	83	89	82	603	69	67	67	109	11
'90.....	76	94	82	81	84	80	577	54	54	54	116	13
'91.....	80	84	76	75	85	85	565	57	54	54	116	11
'92.....	76	84	76	92	92	86	586	58	56	56	120	10

* Index numbers not included in the general average.

Average Prices of Commodities—Contd.

No. of Article }	18	19A*	19B*	19	16-19	1-19	20	21	22	—	23
	Coffee.	Tea.			Sugar, and Coffee, and Tea.	Food. Total.	Iron.		Copper.		Tin.
Year.	Mean of 18A and 18B.	Congou, Common. d. per lb.	Average Import Price. d. and dec. per lb.	Mean of 19A and 19B.	Total.		Scotch Pig. s. and d. per ton	Bars, Common. £ per ton	Chili Bars. £ per ton	English Tough Cake. £ per ton	Straits. £ per ton
78.....	Prices, see preceding page 18A and 18B.	7 $\frac{3}{4}$	15'29	—	—	—	48'5	5 $\frac{5}{8}$	62	67	61
79.....		9	14'68	—	—	—	47	5 $\frac{3}{4}$	58	64	73
80.....		8 $\frac{3}{4}$	13'47	—	—	—	54'6	6 $\frac{3}{4}$	63	68	88
81.....		6 $\frac{1}{2}$	12'82	—	—	—	49'1	5 $\frac{3}{4}$	62	67	93
82.....		5	12'58	—	—	—	49'4	6 $\frac{1}{4}$	66	71	102
83.....		5 $\frac{3}{4}$	12'46	—	—	—	46'9	5 $\frac{3}{4}$	63	67	93
84.....		6 $\frac{1}{4}$	11'78	—	—	—	42'1	5 $\frac{3}{8}$	54	59	81
85.....		6 $\frac{1}{2}$	12'06	—	—	—	41'10	4 $\frac{7}{8}$	43	47	87
86.....		6 $\frac{1}{2}$	11'77	—	—	—	39'11	4 $\frac{5}{8}$	40	44	98
87.....		5	10'58	—	—	—	42'3	4 $\frac{5}{8}$	44	47	112
88.....		4	10'99	—	—	—	39'11	4 $\frac{7}{8}$	81	78	117
89.....		4 $\frac{1}{4}$	10'79	—	—	—	47'9	6 $\frac{1}{4}$	51	54	93
90.....		4 $\frac{1}{2}$	10'65	—	—	—	49'7	6 $\frac{3}{8}$	54	59	94
91.....		5 $\frac{1}{2}$	10'76	—	—	—	47'2	5 $\frac{5}{8}$	51	55	91
92.....		4 $\frac{7}{8}$	10'12	—	—	—	41'10	5 $\frac{1}{2}$	45	48	93
verage											
83-92		5 $\frac{3}{8}$	11 $\frac{1}{4}$	—	—	—	44	5 $\frac{3}{8}$	53	56	96
78-87		6 $\frac{3}{4}$	12 $\frac{3}{4}$	—	—	—	46	5 $\frac{1}{2}$	55	60	89
67-77		11 $\frac{1}{4}$	17 $\frac{1}{4}$	—	—	—	69	8 $\frac{1}{4}$	75	81	105

Index Numbers (or Percentages) of Prices, the Average of 1867-77 being 100.

		*	*								
78.....	106	69	89	79	361	1,825	70	68	83	—	58
79.....	97	80	85	82	349	1,699	69	70	77	—	69
80.....	97	78	78	78	353	1,773	79	82	84	—	84
81.....	84	58	75	66	335	1,714	71	70	83	—	89
82.....	68	45	73	59	303	1,699	71	76	88	—	97
83.....	77	49	72	60	307	1,683	69	70	84	—	89
84.....	73	56	68	62	253	1,501	61	62	72	—	77
85.....	65	58	70	64	250	1,414	60	59	57	—	83
86.....	75	58	69	64	239	1,370	58	56	53	—	93
87.....	113	44	62	53	269	1,336	61	56	59	—	107
88.....	96	36	64	50	259	1,370	58	59	108	—	111
89.....	114	38	63	50	300	1,421	69	76	68	—	89
90.....	123	40	62	51	282	1,382	72	77	72	—	90
91.....	118	49	62	56	285	1,454	68	68	68	—	87
92.....	113	43	59	51	278	1,387	61	66	60	—	89

* Index numbers not included in the general average.

Average Prices of Commodities—Contd.

No. of Article } Year.	24	25	26	20—26	27	28	29A	29B	30A	30B	31
	Lead.	Coals.		Mine- rals. Total.	Cotton.		Flax.		Hemp.		Jut
	English Pig.	Wallsend Hetton in London.	Average Export Price.		Middling Uplands.	Fair Dhollerah.	St. Peters- burg 12 Head Best.	Russian, Average Import.	Manilla Fair Roping.	St. Peters- burg Clean.	Go Medi
	£ per ton	s. per ton	s. and dec. per ton		d. per lb.	d. per lb.	£ per ton	£ per ton	£ per ton	£ per ton	£ per
1878	16 $\frac{5}{8}$	18	9'46	—	6 $\frac{1}{8}$	4 $\frac{1}{10}$	39 $\frac{1}{2}$	40	25	29	17
'79	15 $\frac{1}{8}$	18	8'77	—	6 $\frac{5}{16}$	5	34	35	27	25	16
'80	16 $\frac{1}{2}$	15 $\frac{1}{2}$	8'95	—	6 $\frac{1}{10}$	5 $\frac{1}{4}$	35	40	30	23	18
'81	15 $\frac{3}{8}$	17	8'97	—	6 $\frac{7}{10}$	4 $\frac{3}{8}$	32 $\frac{1}{2}$	33	43	24	17
'82	14 $\frac{1}{2}$	17	9'14	—	6 $\frac{3}{8}$	4 $\frac{5}{10}$	29 $\frac{1}{2}$	30 $\frac{1}{2}$	46	24	17
1883	12 $\frac{7}{8}$	18	9'35	—	5 $\frac{3}{4}$	3 $\frac{7}{8}$	30	30 $\frac{1}{2}$	46	26	17
'84	11 $\frac{1}{4}$	16 $\frac{1}{2}$	9'29	—	6	3 $\frac{1}{10}$	29 $\frac{1}{2}$	30 $\frac{3}{4}$	38	29	17
'85	11 $\frac{5}{8}$	16 $\frac{1}{2}$	8'95	—	5 $\frac{5}{8}$	4 $\frac{1}{4}$	34	35	35	29	17
'86	13 $\frac{1}{4}$	16	8'45	—	5 $\frac{1}{8}$	3 $\frac{9}{10}$	35	35	29	29	17
'87	12 $\frac{7}{8}$	16	8'32	—	5 $\frac{1}{2}$	3 $\frac{9}{10}$	32	31 $\frac{1}{2}$	34	29	17
1888	13 $\frac{7}{8}$	16 $\frac{1}{2}$	8'41	—	5 $\frac{9}{10}$	3 $\frac{7}{8}$	29	28	37	26	17
'89	13	17 $\frac{1}{2}$	10'21	—	5 $\frac{1}{10}$	4 $\frac{8}{10}$	28	28	50	26	17
'90	13 $\frac{1}{4}$	19	12'62	—	6	3 $\frac{1}{10}$	27	26	39	26	17
'91	12 $\frac{1}{2}$	19	12'16	—	4 $\frac{1}{10}$	3 $\frac{1}{4}$	28	26	32	24	17
'92	10 $\frac{5}{8}$	18 $\frac{1}{2}$	11'04	—	4 $\frac{1}{10}$	3	28	26	28	24	17
Average 1883-92	12 $\frac{1}{2}$	17 $\frac{1}{4}$	9 $\frac{7}{8}$	—	5 $\frac{1}{2}$	3 $\frac{3}{4}$	30	29 $\frac{1}{2}$	37	27	17
'78-87	14	16 $\frac{3}{4}$	9	—	6	4 $\frac{1}{4}$	33	34	35 $\frac{1}{2}$	26 $\frac{1}{2}$	17
'67-77	20 $\frac{1}{2}$	22	12 $\frac{1}{2}$	—	9	6 $\frac{3}{4}$	46	47 $\frac{1}{2}$	43	35	17

Index Numbers (or Percentages) of Prices, the Average of 1867-77 being 100.

1878	81	82	76	518	66	73	84	69	9
'79	74	82	70	511	70	74	73	67	8
'80	80	70	72	551	77	78	79	68	9
'81	74	77	72	536	71	65	70	86	9
'82	71	77	73	553	74	64	64	90	7
1883	63	82	75	532	64	58	65	92	7
'84	55	75	74	476	67	59	64	86	7
'85	57	75	72	463	62	63	73	82	6
'86	65	73	68	466	57	53	75	74	6
'87	63	73	67	486	62	53	68	81	6
1888	68	75	67	546	62	58	61	81	7
'89	63	80	82	527	66	61	60	97	7
'90	65	86	101	563	67	58	56	82	7
'91	61	86	97	535	52	48	57	72	7
'92	52	84	88	500	46	45	57	67	7

Average Prices of Commodities—Contd.

No. of Article }	32A	32B	33	34	27—34	35A	35B	36	37A	37B	38
	Wool.			Silk.		Hides.		Leather.	Tallow.		Oil.
No. of Article }	Merino, Port Phillip, Average Fleece.	Merino, Adelaide, Average Grease.	English, Lincoln Half Hogs.	Tsatlee.	Textiles. Total.	River Plate, Dry.	River Plate Salted.	Crop Hides, 30-45 lbs.	St. Peters- burg, Y.C.	Town.	Palm.
	d. per lb.	d. per lb.	d. per lb.	s. per lb.		d. per lb.	d. per lb.	d. per lb.	s. per cwt.	s. per cwt.	£ per ton
.....	20	9 $\frac{1}{8}$	15	16 $\frac{1}{2}$	—	8 $\frac{1}{2}$	6 $\frac{3}{4}$	14 $\frac{3}{4}$	38	38	38
.....	18 $\frac{3}{4}$	8 $\frac{1}{2}$	12 $\frac{1}{2}$	16	—	8	6 $\frac{3}{4}$	14 $\frac{1}{2}$	38	36	34
.....	21 $\frac{1}{2}$	10 $\frac{5}{8}$	15 $\frac{1}{8}$	15	—	9 $\frac{1}{4}$	7 $\frac{1}{2}$	15 $\frac{1}{2}$	41	36	32
.....	19 $\frac{3}{4}$	9 $\frac{1}{4}$	12 $\frac{3}{4}$	15 $\frac{3}{4}$	—	9	7	15 $\frac{1}{4}$	42	38	32
.....	19 $\frac{3}{4}$	9	11 $\frac{1}{4}$	15 $\frac{3}{4}$	—	9	7	15	52	44	35
.....	19	8 $\frac{1}{2}$	10	15 $\frac{3}{4}$	—	9	7	15	50	43	41
.....	18 $\frac{1}{4}$	8 $\frac{1}{8}$	10	14 $\frac{1}{2}$	—	9	7	15	47	37 $\frac{1}{2}$	36
.....	16 $\frac{1}{2}$	6 $\frac{3}{4}$	9 $\frac{7}{8}$	12 $\frac{3}{4}$	—	8 $\frac{3}{4}$	6 $\frac{1}{2}$	15	38	30 $\frac{1}{2}$	30
.....	15 $\frac{1}{2}$	6 $\frac{5}{8}$	10	13 $\frac{1}{2}$	—	8	5 $\frac{3}{4}$	15	31	26	24
.....	15 $\frac{3}{4}$	7	10 $\frac{5}{8}$	14 $\frac{1}{2}$	—	7 $\frac{3}{4}$	6 $\frac{1}{4}$	15	31	24	22
.....	15 $\frac{5}{4}$	7	10 $\frac{3}{8}$	13	—	6 $\frac{3}{4}$	4 $\frac{7}{8}$	14	36	28	22
.....	17 $\frac{1}{2}$	8 $\frac{1}{4}$	11	13 $\frac{1}{2}$	—	6 $\frac{1}{4}$	5	13 $\frac{1}{2}$	38	27	25
.....	16	7 $\frac{1}{2}$	11	14	—	5 $\frac{3}{4}$	5 $\frac{1}{2}$	13	38	26	27
.....	14 $\frac{3}{4}$	6 $\frac{7}{8}$	9 $\frac{3}{4}$	13	—	5 $\frac{1}{2}$	5 $\frac{5}{8}$	13	40	27 $\frac{1}{2}$	26
.....	13	6	8 $\frac{3}{4}$	12 $\frac{1}{4}$	—	5 $\frac{1}{2}$	4 $\frac{5}{8}$	13	45	27	24
Age											
92	16 $\frac{1}{4}$	7 $\frac{1}{4}$	10 $\frac{1}{8}$	13 $\frac{5}{4}$	—	7 $\frac{1}{4}$	5 $\frac{3}{4}$	14 $\frac{1}{4}$	39 $\frac{1}{2}$	29 $\frac{1}{2}$	27 $\frac{1}{2}$
87	18 $\frac{1}{2}$	8 $\frac{3}{8}$	11 $\frac{1}{4}$	15	—	8 $\frac{5}{8}$	6 $\frac{3}{4}$	15	41	35 $\frac{1}{2}$	32 $\frac{1}{2}$
77	21 $\frac{1}{4}$	9 $\frac{7}{8}$	19 $\frac{3}{4}$	23	—	9	7	16	45	45	39

Index Numbers (or Percentages) of Prices, the Average of 1867-77 being 100.

93	76	72	623	94	92	84	97
88	63	69	591	92	91	82	87
103	77	65	646	105	97	86	82
92	63	68	613	100	95	89	82
92	57	68	588	100	94	107	90
89	51	68	562	100	94	103	105
85	51	63	546	100	94	94	92
73	50	55	521	95	94	76	77
70	51	60	501	85	94	63	61
72	54	63	517	88	94	61	56
72	53	57	514	73	87	71	56
82	56	59	560	70	84	72	64
76	56	61	526	70	81	71	69
70	49	57	473	66	81	75	67
61	44	53	452	63	81	80	61

Average Prices of Commodities—Contd.

No. of Article }	39	40A	40B	41	42	43	44	45A	45B	35—45	20—45	1—4
	Oil.		Seeds.	Petro- leum.*	Soda.	Nitrate of Soda.	Indigo.	Timber.		Sundry Mate- rials. Total.	Mate- rials. Total.	Gran Total
Year.	Olive.	Linseed.	Linseed.	Refined.	Crystals.		Bengal, Good Con- suming.	Hewn, Average Import.	Sawn or Split, Average Import.			
	£pertun	£perton	s. per qr.	d. per gall.	s. per ton	s. per cwt.	s. per lb.	s. per load	s. per load			
1878.....	49	26	49	9 $\frac{1}{8}$	70	15	5 $\frac{1}{2}$	49	50	—	—	—
'79.....	46	27	52	7 $\frac{3}{8}$	68	15	6 $\frac{1}{4}$	42	43	—	—	—
'80.....	41	27	54	7 $\frac{1}{2}$	74	15 $\frac{1}{2}$	7 $\frac{1}{4}$	49	52	—	—	—
'81.....	38	26	50	7 $\frac{1}{4}$	65	14 $\frac{1}{2}$	6 $\frac{3}{4}$	51	50	—	—	—
'82.....	37	23	44	6	63	13 $\frac{1}{4}$	6 $\frac{1}{2}$	52	52	—	—	—
1883.....	36	20	42	6 $\frac{1}{2}$	66	11 $\frac{1}{4}$	6 $\frac{1}{4}$	52	48	—	—	—
'84.....	40	20	43	6 $\frac{1}{2}$	65	9 $\frac{1}{2}$	6	48	46	—	—	—
'85.....	39	22	44	6 $\frac{7}{8}$	55	10 $\frac{1}{2}$	5 $\frac{1}{4}$	48	45	—	—	—
'86.....	38	20 $\frac{1}{2}$	42	5 $\frac{7}{8}$	49	10	5	43	43	—	—	—
'87.....	34	20 $\frac{1}{2}$	38	5 $\frac{3}{8}$	50	9 $\frac{1}{2}$	4 $\frac{3}{4}$	38	42	—	—	—
1888.....	36	18 $\frac{1}{2}$	39	6 $\frac{1}{2}$	48	10	4 $\frac{3}{4}$	41	44	—	—	—
'89.....	35	20	42	5 $\frac{3}{4}$	51	9 $\frac{1}{2}$	4 $\frac{1}{2}$	47	49	—	—	—
'90.....	41	23	43	5 $\frac{1}{2}$	61	8 $\frac{1}{2}$	4 $\frac{1}{4}$	44	46	—	—	—
'91.....	43	21	42	5 $\frac{3}{8}$	64	8 $\frac{3}{4}$	4 $\frac{3}{4}$	40	43	—	—	—
'92.....	36	18 $\frac{1}{2}$	39	5	66	8 $\frac{1}{4}$	4 $\frac{1}{2}$	40	44	—	—	—
Average												
1883-92	38	20 $\frac{1}{2}$	41 $\frac{1}{2}$	6	57	9 $\frac{1}{2}$	5	44	45	—	—	—
'78-87	40	23	46	6 $\frac{1}{4}$	62	12 $\frac{1}{2}$	6	47	47	—	—	—
'67-77	50	30	60	12 $\frac{1}{2}$ *	92	14	7 $\frac{1}{4}$	60	54	—	—	—
Index Numbers (or Percentages) of Prices, the Average of 1867-77 being 100.												
1878.....	98	85	73	76	107	76	87	969	2,110	3,98		
'79.....	92	89	59	74	107	86	75	934	2,036	3,7		
'80.....	82	90	60	80	111	100	89	982	2,179	3,9		
'81.....	76	85	58	71	104	93	89	942	2,091	3,8		
'82.....	74	75	48	69	95	90	91	933	2,074	3,7		
1883.....	72	68	52	72	80	86	88	920	2,014	3,6		
'84.....	80	69	52	71	68	83	82	885	1,907	3,4		
'85.....	78	73	55	60	75	72	81	836	1,820	3,2		
'86.....	76	69	47	53	71	69	76	764	1,731	3,1		
'87.....	68	65	45	54	68	66	70	735	1,738	3,0		
1888.....	72	63	52	52	71	66	74	737	1,797	3,1		
'89.....	70	69	46	55	68	62	84	744	1,831	3,2		
'90.....	82	73	45	66	61	59	79	756	1,845	3,2		
'91.....	86	70	45	70	63	66	73	762	1,770	3,2		
'92.....	72	64	40	72	63	62	74	732	1,684	3,0		

* Petroleum as compared with the average from 1873-77 only.

Summary of Index Numbers. Groups of Articles, 1867-77 = 100.

	Vegetable Food (Corn, &c.).	Animal Food (Meat, &c.).	Sugar, Coffee, and Tea.	Total Food.	Minerals.	Textiles.	Sundry Materials.	Total Materials.	Grand Total.	Silver.*	Wheat Harvest.*	Average Price of Consols.*	Average Bank of England Rate.*
3...	106	81	98	95	92	77	86	85	89	97.5	deficient	95 $\frac{3}{4}$	3 $\frac{1}{4}$
7...	129	88	87	105	94	78	86	86	95	98.1	above average	87 $\frac{1}{4}$	5 $\frac{1}{4}$
3...	92	83	69	84	78	64	77	73	78	97.8	very deficient	85 $\frac{1}{2}$	3 $\frac{3}{4}$
0...	79	71	77	76	77	67	75	73	74	98.2	123	92 $\frac{1}{2}$	3
0...	74	67	87	75	77	78	80	78	77	98.7	102	96 $\frac{1}{2}$	2 $\frac{1}{2}$
1...	73	68	84	74	75	75	79	76	75	99.9	110	97 $\frac{1}{2}$	3
2...	80	69	75	75	80	78	84	81	78	99.9	79	99 $\frac{3}{8}$	2
3...	100	82	87	91	105	87	101	97	95	101.2	71	97 $\frac{3}{4}$	3 $\frac{1}{2}$
4...	120	87	85	101	115	88	109	104	102	101.1	127	91 $\frac{7}{8}$	5
5...	120	87	89	101	109	84	109	101	101	100.7	96	90 $\frac{1}{2}$	4 $\frac{1}{4}$
6...	109	88	97	99	110	89	109	102	101	101.0	96	93 $\frac{1}{2}$	5 $\frac{1}{4}$
7...	105	89	119	102	108	92	119	107	105	101.5	124	91 $\frac{1}{2}$	6 $\frac{1}{4}$
3...	87	83	97	88	96	84	102	94	91	101.0	116	96 $\frac{1}{2}$	3 $\frac{1}{4}$
0...	85	85	102	89	98	88	107	98	94	102.0	92	95 $\frac{1}{2}$	2 $\frac{1}{4}$
0...	99	91	107	98	97	90	111	100	99	101.4	78	94	4 $\frac{1}{4}$
1...	102	91	96	97	91	92	109	99	98	99.9	92	91 $\frac{1}{2}$	5 $\frac{1}{4}$
2...	98	86	98	94	91	123	106	107	101	100.9	108	93	2 $\frac{1}{2}$
3...	87	85	99	89	93	149	101	115	103	101.1	141	92 $\frac{3}{8}$	4 $\frac{1}{2}$
4...	79	89	106	88	96	162	98	119	105	100.9	127	90 $\frac{1}{2}$	7 $\frac{1}{2}$
5...	84	97	97	91	91	134	97	108	101	100.3	110	89 $\frac{1}{2}$	4 $\frac{1}{4}$
6...	95	96	94	95	91	130	99	107	102	100.5	90	88	7
7...	115	89	94	101	87	110	100	100	100	99.7	74	93	2 $\frac{1}{2}$
8...	113	88	96	100	85	106	102	99	99	99.6	126	93 $\frac{7}{8}$	2 $\frac{1}{4}$
9...	91	96	98	94	89	109	100	100	98	99.6	102	92 $\frac{7}{8}$	3 $\frac{1}{4}$
0...	88	98	95	93	89	106	99	99	96	99.6	112	92 $\frac{1}{2}$	3 $\frac{3}{8}$
1...	94	100	100	98	93	103	105	101	100	99.7	90	92 $\frac{3}{4}$	2 $\frac{7}{8}$
2...	101	101	104	102	127	114	108	115	109	99.2	92	92 $\frac{3}{4}$	4 $\frac{1}{8}$
3...	106	109	106	107	141	103	106	114	111	97.4	80	92 $\frac{1}{2}$	4 $\frac{3}{4}$
4...	105	103	105	104	116	92	96	100	102	95.8	106	92 $\frac{1}{2}$	3 $\frac{3}{4}$
5...	93	108	100	100	101	88	92	93	96	93.3	78	93 $\frac{3}{4}$	3 $\frac{1}{4}$
6...	92	108	98	99	90	85	95	91	95	86.7	96	95	2 $\frac{3}{8}$
7...	100	101	103	101	84	85	94	89	94	90.2	74	95 $\frac{3}{8}$	2 $\frac{7}{8}$
8...	95	101	90	96	74	78	88	81	87	86.4	108	95 $\frac{3}{10}$	3 $\frac{3}{4}$
9...	87	94	87	90	73	74	85	78	83	84.2	64	97 $\frac{1}{2}$	2 $\frac{3}{8}$
0...	89	101	88	94	79	81	89	84	88	85.9	93	98 $\frac{3}{8}$	2 $\frac{3}{4}$
1...	84	101	84	91	77	77	86	80	85	85.0	97	100	3 $\frac{1}{2}$
2...	84	104	76	89	79	73	85	80	84	84.9	100	100 $\frac{1}{2}$	4 $\frac{1}{8}$
3...	82	103	77	89	76	70	84	77	82	83.1	93	101 $\frac{3}{10}$	3 $\frac{1}{10}$
4...	71	97	63	79	68	68	81	73	76	83.3	103	101	3
5...	68	88	63	74	66	65	76	70	72	79.9	108	99 $\frac{1}{4}$	3
6...	65	87	60	72	67	63	69	67	69	74.6	93	100 $\frac{3}{4}$	3
7...	64	79	67	70	69	65	67	67	68	73.3	110	101 $\frac{3}{4}$	3 $\frac{7}{10}$
8...	67	82	65	72	78	64	67	69	70	70.4	96	101	3 $\frac{1}{10}$
9...	65	86	75	75	75	70	68	70	72	70.2	103	98	3 $\frac{6}{10}$
0...	65	82	70	73	80	66	69	71	72	78.4	106	96 $\frac{1}{2}$	4 $\frac{1}{10}$
1...	75	81	71	77	76	59	69	68	72	74.1	108	95 $\frac{3}{4}$	3 $\frac{1}{10}$
2...	65	84	69	73	71	57	67	65	68	65.4	91	96 $\frac{3}{4}$	2 $\frac{1}{10}$

* Silver 60.84 per oz. = 100; Wheat harvest in the United Kingdom, 1849-83, 28 bushels per acre = 100, from 1884, 29 bushels = 100; Consols and bank rate actual figures, not index figures; consols 2 $\frac{3}{4}$ per cent. from 1889.

DISCUSSION on MR. SAUERBECK'S PAPER.

PROFESSOR F. Y. EDGEWORTH said that he might perhaps express a wish that Mr. Sauerbeck would point out a little more clearly the relation of the two variants on the common average which he had proposed (p. 218), viz., (1) calculating each article according to its importance, and (2) calculating the quantities in the United Kingdom. It was only, he thought, by very careful comparison with the earlier paper that this relation could be discovered. The "importance" of articles might depend on various circumstances. It might depend on their value at the initial (or standard) period; or, again, at the particular period considered (*e.g.*, the current year). He would ask whether theoretically the index numbers obtained by the following two methods were not equally good: (1) comparing the initial quantities at the initial prices with the same quantities at prices of the particular year; (2) by comparing the quantities of the particular year at the initial prices with the same quantities at prices of the particular year. Theoretically one method was as good as the other; perhaps, ideally, a mixture of the two would be best. Another method was to take, not the arithmetic average, but the median, *i.e.*, the figure which was just in the intermediate position when all the given comparative prices were arranged in quantitative order. Operating himself in this manner on Mr. Sauerbeck's figures, he had found the index number for the present year to be 66. Generally the median hugged the arithmetic mean, but occupied a somewhat lower position, as might be expected, since the extreme high percentages affected the median rather less. There was no particular reason for not regarding the median as as good an index of the change in prices as the more cumbrous arithmetic mean. Considering next the inferences to be drawn, he was sensible of the delicacy of the problem to determine whether the change in the value of gold was due to a change on the side of commodities or of gold. The question seemed somewhat similar to an inquiry whether a change in the depth of a river was due to a change in its width or its volume. In a recent article in the "Nineteenth Century," Mr. Courtney had directed attention to the diminution in the supply of gold, and argued that as gold became more valuable so the supply should increase. There was therefore an *a fortiori* argument that the cause of low prices was partly on the side of gold, in so far as the supply had not increased. It should be considered whether the temporary reduction by a few millions could be pressed into the service of that argument. Much light was thrown on the argument by Mr. Giffen's paper, read before the Society in 1879.

Mr. H. MONCREIFF PAUL remarked that the fall in wheat at the close of 1892 and the beginning of the present year, was partly the

outcome of taking the "Gazette" average of prices for Great Britain only, which were unduly depressed during the close of 1892 in consequence of the large proportion of damaged wheat included in such average. The "Gazette" averages were obtained by returns merely of home grown wheat from a number of towns in Great Britain, and there was no discrimination between damaged and other wheat shown therein. With regard to the prices of animal food being highest during the third quarter of the year, his own observations led him to believe that the prices of animal food in the Smithfield market between January and June were usually higher than between July and December. The reason—apart from the incidence of Lent, when the consumption was not very great—was, he thought, that there was a large proportion of other food, such as fruit, vegetables, and game, available during the third quarter of the year. He considered that the expression used in the paper, "estates financing companies in Australia," was not sufficiently precise to be thoroughly intelligible to those not intimately conversant with Australian financial affairs. The recent failures of some of these institutions in Australia were caused by the inflation of the value of town and suburban land, and did not in any wise affect the values of the great pastoral estates which had not been subjected to any such inflation. Railways and telegraphs enabled the products of all parts of the world to be brought hither more quickly and more cheaply, thereby bringing the consumer *en rapport* with the producer, and to some extent doing away with the middleman. Another very important factor was the reduction in the rate of ocean borne freights. As countries grew richer people naturally preferred gold to silver, as being more convenient, and the purchasing power of the gold was *pro tanto* diminished; whereas poorer countries could retain silver as a standard and circulating medium without inconvenience. Gold must not be looked upon as a commodity when referred to in connection with currency. In proportion to the population, less gold was now required than formerly, as we had the benefit of telegraphic transfers, and made a larger use of cheques, bills, &c., so that international and other debts could be settled without the actual transfer of so large an amount of bullion. The Australian and early Californian gold discoveries had a marked effect on the production of gold, and while the mania lasted the consumption of commodities at the gold fields was quite abnormal. When the output from these alluvial gold fields decreased the consumption of commodities also to some extent decreased, and there was consequently a fall in the price of commodities. It must not be forgotten that the United States in purchasing silver did so with a view to stimulating the output of their mines. Hoarding of the precious metals had been very common in France until after the Franco-Prussian war, when a great deal of money had been brought out of "the old stocking" to be invested in French rentes, and the masses had thus learnt that they could get interest for their money. It would be the same in India and elsewhere, where hoarding would still go on until the people had been sufficiently educated to know that it was more profitable to lend the money at

interest than to bury their treasure in the earth. With regard to the loss on exchange in India and other silver using countries, it was certainly very hard on a man in the service who had to remit to this country a portion of his income for the education or maintenance of his family, and means should be taken to compensate him for such loss. On the other hand, an Anglo-Indian had no right to complain, who, having made his fortune and fixed his investments in India, came home to England, and received his remittances here at the exchange of the day, for he was only paying the penalty of absentee ownership, and against it he might set the advantages gained by a sojourn in the old country. It was proper to point out in conclusion that the demonetisation of silver in Germany in 1876 was quite an exceptional feature, one not likely to repeat itself in future years.

Mr. JOHN DUN said that he should like to refer to the connection between the quantity of money and prices. It had always seemed to him that most people who speculated and wrote upon this subject attached too little importance to the purchasing power of credit, and that the quantity of money had not such intimate relation to prices as the fluctuations of credit. When credit was bad prices fell; when it was good they rose. He did not mean to say that credit was the main factor, but it was an important one. He gathered that Mr. Sauerbeck somewhat sympathised with the scheme laid before the Brussels Conference by Mr. Alfred de Rothschild, viz., that means should be found to assist the United States in their efforts to maintain the use of silver, until the tendency of production was better known. He (Mr. Dun) felt very strongly that the natural course of prices and values as governed by supply and demand could not be controlled by artificial means. America had been trying to bolster up silver for many years, and the result was confusion. Gold and silver should be left to find their own level, and he accordingly agreed with the hope that the Indian Government would not take the advice of the Currency Association to interfere with the free coinage of silver. There might be a further fall, but it was better to face that than to attempt by artificial means to stem the natural course of events. The question in America now was whether a gold or silver basis should be adopted; if their immediate interests for the next two or three years only were considered, the Americans would probably adopt a silver basis, but if the statesmen there took a more comprehensive view of the future, and considered that when they had abandoned their present fiscal policy, they would be one of the greatest exporting countries, and would take a prominent part in conducting the exchange transactions of the world, he had no doubt they would adopt a gold standard.

Mr. E. L. WALFORD pointed out that the fall in the price of wheat in 1892 almost coincided with that in the price of silver, the fall in the Indian exchange having enabled Indian wheat to be delivered in London at very low prices. In respect to the silver question in general, Mr. Dun had already said most of what he

(Mr. Walford) had intended to say on the subject. But with regard to the American silver question in particular, the fact was, that the owners of silver mines in America had contrived to get the bills passed in their own interests, although these bills were diametrically opposed to the general interests of the American nation, and it was therefore quite useless to discuss the question from an economic point of view.

MR. STEPHEN BOURNE said he had that morning referred to the tables in some of his own former papers to see how far his annual variations in the price of goods agreed with those of Mr. Sauerbeck. The material was of course different, as his own figures referred to the whole of the imports and exports. They were not complete up to the present time, but, even had they been so, they would not have been strictly comparable with those of Mr. Sauerbeck, except as regards the annual variation. He found that the variation in his figures concided very nearly with that shown by Mr. Sauerbeck. During the period 1878-92, the sum of the variations, according to Mr. Sauerbeck, was a fall of 39 per cent., whilst his own estimate, deduced from the quantities imported, was a fall of 35 per cent. These results were quite near enough to justify the assertion that the mode of investigation on both sides, though different (Mr. Sauerbeck's figures being based on the market prices of forty-five articles without reference to quantity), was trustworthy. The total variation in the price of exports he had found to be 31·3 per cent., which was certainly below Mr. Sauerbeck's 39 per cent.; still he did not think this surprising, considering the difference in the method employed. He quite agreed with previous speakers that there was very little connection between the quantity of money in the country and prices. Prices depended on the available means of bartering goods. There never was less occasion for the use of a large quantity of money than at the present moment. Concurrently with the depression of money prices, they had adopted a variety of systems, such as the use of cheques, money orders, &c., for dispensing with metallic money. Consequently he could not see that they were suffering from any scarcity of gold. All investigations seemed to show that the quantity of silver had largely increased of late; but he did not think they need anticipate no further increase in gold. It was only necessary to refer to the diagrams to see that there was no correspondence between the quantity of gold and the fluctuations in the prices of goods. The most discouraging feature was that our exports were falling off in quantity and in price as well. Last year the deficiency in the imports was 12 millions, but there was really an increase of 8 millions in quantity and a decrease of 20 millions in price; and it was clearly to the advantage of the consumer that he should get a larger quantity of goods for a less amount of money. In the exports there was a fall both in quantity and in price, concurrently with an increase in wages, due in part to the attitude of the labouring classes, which must inevitably drive away a large amount of trade from this country. When the diminution in price was due to improvements in manufacture or increased facilities of

transport, it was all to the advantage of the consumer; but that was not the case when the artisan required more wages, and the product was of less value. With regard to the future, all geologists were of opinion that a larger amount of gold existed in the world which might be brought into use, and if any relation between the two metals were fixed, it would probably be upset again in a few years. Some little while ago there was an alarm about the probable failure of the coal supply, but the consumption of that mineral had been so greatly reduced of late, while new fields had been discovered, that these fears had proved groundless; and he believed the same thing would happen with regard to the production of gold.

Sir RAWSON W. RAWSON said that, in the sequel to his "Synopsis of the Tariffs and Trade of the United Kingdom," he had proposed a method of index numbers founded upon the prices of imports and exports as measured by the tonnage, and he was happy to find that his figures also agreed fairly well with those of Mr. Sauerbeck. They could not be expected to agree altogether, since his own calculations excluded coal, which formed fully 45 per cent. of the tonnage of our exports, while its value was comparatively small. He was very glad to see that Mr. Sauerbeck's new tables gave the averages for the quarter. Monthly averages, in the case of some of the most important commodities, such as corn, raw cotton, wool, &c., often showed very large fluctuations—dependent on the weather and other accidental causes, which did not affect quarterly averages to nearly the same extent. Another important consideration was the influence which particular booms had upon even yearly averages. These booms were limited to some five or six articles, and the averages of the remainder ought not to be allowed to be affected by them. It would be interesting to learn the exact effect produced by particular disturbances. Another fact brought out by the tables was that the price of American wheat was for several years past above that of English; the reason being that what came from America was selected wheat, while the English averages were founded upon the price of all qualities. With regard to silver, it was interesting to note that whereas from the period 1818-27 until 1888-92, the index number for all commodities fell from 111 to 71, that of silver only fell from 99 to 71·7. He thought it impossible to establish a permanent relation between gold and silver, which were articles varying in quantity from year to year, and they must accordingly vary in price. To establish a ratio by law would be to do an injustice to the producers of one or the other, and to the consumers of both. The value of silver seemed to follow the value of commodities in general, and he believed that it must be left to take its natural course, not as a precious metal forming a standard, but as an article of production.

Mr. J. H. SHERWIN said that Mr. Paul had considered the price of wheat for last year shown on the diagrams to be too low, as it was in bad condition. The "Gazette" averages were given for the purpose of fixing tithe rent-charge values on the result of the

wheat sold in a certain number of large towns, and farmers complained that the wheat sold there was the best, so that they did not get the advantage of the poorer qualities which could not be brought to market. He thought therefore that the prices quoted were too high rather than too low.

Mr. A. K. CONNELL was glad to find that Mr. Sauerbeck and others were opposed to the closing of the Indian mints against the coinage of silver. For the last twenty or thirty years the revenue in many parts of India had been raised in cash instead of in kind. The result was that at the two harvests there was a rush of grain into the markets in order that it might be converted into rupees, and the tendency was to put the people more into the power of the money lenders. If therefore the number of rupees were diminished at harvest time, when there was a universal demand for them, the peasantry would be still more in debt to the money lenders. To close the mint against silver would consequently be an act of gross injustice. The interest of the great mass of the peasantry in India was not sufficiently considered by Anglo-Indian officials, who, in their own interests, naturally cried out for legislative action to appreciate the value of silver.

The CHAIRMAN (Mr. Rowland Hamilton) said that he had been in the East for a long period between 1850 and 1870, during which time the question of exchange had been one of constant interest. Speaking broadly, Asia had a silver standard, Europe a gold one. The gold discoveries from about 1850 had promoted the rapid development of trade in Asia to a greater extent than was generally recognised. It was the ample supply of gold in Europe that set free the silver required for carrying out many new branches of trade which the increase in steam communication and other facilities for traffic had brought within the range of commercial enterprise. The demand for silver was also increased by two special causes. The very general failure of the European silk crop caused a very large and urgent demand for this article from India and China at very high prices. Again, at the time of the American war, excessive prices were paid for Indian cotton; but in neither case was there any difficulty in obtaining the very large value of silver required, gold supplying in Europe the place of the silver exported. The question of the standard had been carefully considered in India before 1870, and gold was even then generally held to be the more stable, as comparatively "difficult of attainment," but believed to be available in many different regions of the world. With regard to the present depressed price of silver, there was no reason to suppose that its purchasing power in India (or China) had materially diminished. An excessive quantity had been poured into India, far in excess of the commodities suitable to European demand which were immediately available to make the returns required in payment for it; and he was of opinion that the extreme and rapid fall in the European exchange price arose in a great measure from this cause. If the supply could be more reasonably adapted to the requirements of trade in India, he saw no reason why there should not be a certain amount of recovery

in the value of silver. The due distribution of gold and silver throughout the world cannot be unduly forced.

Mr. SAUERBECK in reply, said that it had not been his intention to raise a bi-metallic discussion. His paper was constructed on the same lines as his former one, giving the fluctuations of prices, and what he thought had caused them, and giving also a comparison with earlier periods. He quite admitted the importance of lower freights and the expansion of railways in cheapening production, but did not quite agree with Mr. Paul that because there was a lowering of freight, prices must fall. If nine-tenths of the quantity of wheat consumed in Europe were grown there, and one-tenth in India, it did not follow that the price of wheat would fall simply because freights had fallen. It seemed to him that a fall in freights helped to open up new countries, and made production there more remunerative. More would therefore be produced, and the quantities acted on prices, but from 1850-73 there had been an enormous increase in production without a fall. He was fully aware of the economy made now in the use of money, and had treated the subject in his first paper, but he could not agree with one of the speakers that much was economised in international trade, as the precious metals were still sent about as much as ever. The exact connection between the quantity of money and prices was difficult to define. In his opinion the economising of money depended more on the whole system of banking than on the actual mode of payment, but whatever system were in force, so long as that system remained the same, a certain amount of money was required, and if there were more people and more commerce, more money would be wanted, whatever proportion of the total transactions were conducted by means of money, inclusive of reserves. He would not say it would follow exactly the same proportion: in the same way as a town increasing from 1,000,000 to 2,000,000 need not require the same amount as two towns of 1,000,000 inhabitants. Banking had made further progress in this country by an addition to the numbers of branch offices, and by issuing cheques for smaller amounts, but on the whole the system had already been fully developed here and in the United States more than twenty years ago. If a man instead of keeping his money at home gave it to a banker who only kept a certain reserve, say 10 or 20 per cent., the difference was saved. In continental countries there had not been much progress in this respect. In Germany the transfer business of the Imperial Bank had greatly increased, but in consequence merchants had to keep larger balances, and as the bank kept 60 or 70 per cent. of its liabilities in cash, there was not much saving. Formerly bills of exchange were largely used for payments from one place to another, and cash only to a moderate extent; now the bills were discounted and transfers used in their place. He did not see any great advance in the economy of money on the continent, and he believed that if the system of paying remained the same, the increase of population and commerce would require more money to be in circulation if prices were to be kept up.

WORKMEN'S BUDGETS. *By* HENRY HIGGS, ESQ., LL.B.

[Read before the Royal Statistical Society, 16th May, 1893.

The President, CHARLES BOOTH, ESQ., in the Chair.]

It is one of the penalties of our advantages as an insular people that we are sometimes slow to profit by any movement which takes its rise on the continent of Europe. This cannot be wholly due to geographical position; for the American student manages to keep closely in touch with European schools of thought, and sometimes does English statisticians the service of sending them such work as the translations of Meitzen. It is from the United States, again, that we are receiving the transmitted impulse of French influences in the workmen's budgets collected by the Department of Labour. Happily the International Institute of Statistics is bringing us into more direct scientific contact with our neighbours. Its annual *Bulletin* attests its interest in the subject of family budgets, upon which it has appointed a special committee.

It may, no doubt, be said that—so far are we from being behind in these studies—it was really in this country that they took their rise. Petty, the so-called father of statistics, was not without a keen sense of their importance; and through Davies and Eden, Sargant and Dudley Baxter, we come down to the President of this Society. But, after all, there is nothing here—nor, so far as I am aware, in America either—which will compare in fulness and scientific completeness with Le Play's conception of a family budget. Turn over the Journals of this Society for the last twenty years. Here, if anywhere, are reflected the statistical activities of the age. But you will seek in vain for any record of the complete cost of living of a family or families in any class of life. Yet these facts are the bottom rock of the condition of the people. The members of the Economic Club and their friends have recently brought together upon the subject some promising materials which I have been privileged to see; but it is understood that the results have not been sufficiently digested to admit of conclusions at present. Some of the more directly statistical portions of a workman's budget, which I am now compiling, are translated in the charts which my friend Mr. Ernest Aves has been kind enough to construct for this paper. But I must ask to be excused to-night if I occupy your time mainly in adducing some reasons why we in

this Society might usefully bend our energies to the observation and collection of family statistics. Parallel movements are to be noticed in politics and natural science, and even in literature and art: democracy and decentralisation in the first, microscopic research in science, realism in literature and in art—humble, minute, truthful, descriptiveness in statistics itself, of which we have so faithful an example in London to-day in the work of him

“who took

The piebald People for his book.”

We have, however, a choice of methods. We may proceed by the *extensive* method and obtain particulars of some thousands of families, limiting our inquiries to certain exterior particulars, and producing results more or less susceptible of averages. Or we may adopt the *intensive* method of Le Play, in favour of which I shall presently offer some observations.

An interesting partial experiment in the first of these methods has been recently described by Dr. Ogle.¹ Cards of questions were at the Government expense distributed in four working class districts of London, one card to each distinct family, a single man living alone being regarded as a family, but not a single man living with his father. 29,451 answers were received, including 8,007 (or 27 per cent.) from men out of work, a preponderance due, I suppose, to their having more leisure and inclination to fill up the schedules. The 21,443 men in work with their families numbered in all 97,784; 2,297 were bachelors, 674 widowers, with 1,299 children, 18,472 married with 54,889 children, and 1,681 were “other relatives.” The distribution of the men is given by age and by size of families. The families are also classified by number of rooms, amount of rent, and wages. They average 2·81 rooms per family at 6s. 2d. a week rent; wages average 24s. 6½d. a week, or, including those out of work, 17s. 10½d. Other members of the family earned on the average 1s. 7½d., taking those cases where the head of the family was in work, 2s. 8½d. where he was not, raising the totals to 26s. 2d. and 19s. 9½d. respectively. The average rent of the families in work is thus stated to be 23½ per cent. of their total expenditure,² differing widely from the 12 per cent. of Engel and Leone Levi. “A knowledge of the amount of wages “in money,” says Dr. Ogle, “gives little information unless we “have some knowledge of the necessary cost of living.” It cannot escape attention, however, that the figures above given do not

¹ “Bulletin de l'Institut International de Statistique,” tome vi, 1^{ère} livraison, p. 180. Rome, 1892.

² It appears to be assumed that income and expenditure are equal.

supply us with the cost of food, clothing, &c., and any attempt to ascertain these by impersonal inquiries through printed schedules seems doomed to suffer shipwreck.

In 1887, 730 schedules were sent out by the Labour Correspondent of the Board of Trade to selected workmen, trade union officials, and co-operators, asking for information upon their family income and expenditure.³ Though the addressees probably represent the flower of public-spirited workmen, only 36 replies were received, of which 2 were too imperfect for publication. The remaining 34 exhibit numerous flaws. The number of the family is left in doubt, as it does not appear whether the man is a widower, or whether any of his children are away from home. Some items of expense (*e.g.*, eggs, lard, fruit, tobacco, insurance, charity, and religion) are omitted from the schedule, and many of the entries of expenditure are evidently rough guesses. But imperfections inevitable in a first attempt should not be taken too much to heart. Profiting by experience and by its new organisation, the Board of Trade could hardly do better than continue the undertaking under the altered circumstances of personal and sympathetic contact between the family and the official correspondent, by whom the individual return might be supervised.

The personal method was adopted by the United States Department of Labour for its colossal inquiry into the cost of production of coal, iron, and steel, described in the sixth annual report of the Commissioner of Labour, Washington, 1890. One branch of this inquiry relates to cost of living, viewed as an element in the cost of production—industrial efficiency depending very much upon nutrition, or, in the vigorous language of General Walker, “what the employer will get out of his workman will “depend very much on what he first gets into him.” This inquiry, easily the most important example of the “extensive” method of family budgets, embraces 3,260 families of 16,581 persons, and furnishes for each family the following particulars: Locality; nationality; occupation; wife at home or at work; children at work, at school, at home, unknown; boarders and others; total in family; ages and sex; whether own house; income from occupation of husband, wife, children; from board and lodging; from other sources; total income; expenditure (quantities and cost) for beef, hog products, meat not specified, eggs, lard, butter, tea, coffee, sugar, molasses, potatoes, poultry, fish, milk, flour and meal, bread, rice, cheese, fruit, vinegar, pickles and condiments, vegetables not specified, food not specified, total food; rent (rooms and cost); kind, quantity and cost of fuel and lighting; clothing (husband,

³ “Returns of Expenditure by Working Men, 1889.” C-5861. Price 5½*d.*

wife, and children); furniture and utensils; taxes; insurance (property and life); organisations (labour and others); religion; charity; books and newspapers; amusements and vacation; intoxicating liquors; tobacco; sickness and death; other expenses; total expenses for the year; surplus or deficit; and remarks. A million or more of figures upon these particulars must be admitted to be sufficiently complete for the purpose in view. In ability of conception, and in industry and thoroughness of execution, the report is a monument in the history of statistics. It will be followed at once by a report of about two thousand pages upon the glass and textile trades, which Mr. Carroll Wright tells me will contain more information upon the cost of living than any work yet published.

The six industries passed in review are those of pig iron, bar iron, steel, bituminous coal, coke, and iron ore. 2,490 families were observed in the United States, including 796 of British nationality, viz., English, 238, Welsh, 111, Scotch, 62, Irish, 385. Of the 770 observed in Europe, 525 were British, 118 Belgians, 66 Germans, 38 Poles, 22 French, and 1 Italian. The families in America are classified by States and nationalities, bringing forcibly home to us the composite character of the American people. These families average 5 persons each, and those in Europe 5·3. From the summary of results I select the following comparisons of averages for a year (amounts in dollars) :—

	Number of Families observed.	Number of Persons in Family.	Income from		Own House.	Rent.	Food.	Fuel and Light.*	Clothes.*	Taxes.	Furniture and Utensils.	Intoxicating Liquors.	Tobacco.	Total Expenses.	Surplus per Head.
			Husband.	All sources.											
United States	2,490	5.0	534.5	622.14	540	74.6	243.6	30.2	114.0	6.4 (1,572 fam.)	24.2 (1,989)	19.6 (1,329)	11.0 (2,100)	555.81	13.23
England	293	5.1	416.9	496.75	7	50.2	224.8	27.3	82.5	25.6 (8 fam.)	6.3 (246)	23.7 (219)	11.8 (237)	460.93	6.97
Wales	80	4.6	325.0	436.5	3	35.4	214.1	26.3	68.0	4.1 (3 fam.)	7.2 (36)	19.9 (55)	19.9 (57)	403.32	7.17
Scotland	114	5.6	533.6	669.4	1	50.3	335.2	20.8	102.9	5.8 (106 fam.)	9.4 (101)	39.1 (31)	15.0 (25)	600.47	12.21
Ireland	38	4.6	355.1	457.46	—	45.2	214.8	27.5	67.4	7.1 (7 fam.)	4.5 (28)	22.3 (27)	12.2 (24)	428.03	6.43

* Number of families slightly lower.

The returns of wages were obtained from employers, and the statements of expenses from the families concerned, though it does not clearly appear how these latter were computed. Dr. Gould, president of the travelling commissioners in Europe, says: "When the workmen had not kept their accounts, or did not belong to a co-operative society, we were often accompanied into their homes by an old postman or policeman, or some other person enjoying their confidence and their acquaintance."⁴ It is probable, therefore, that in the majority of cases the details of annual expenditure are estimated or based upon records covering a very short period of time. As a study in comparative statistics the returns are of great interest. We can compare, *e.g.*, not merely the coal miner's standard of living in Europe and America, but the English or Welsh collier at home with the English or Welsh collier in the States, the Irish or Scotch American with the Irishman or Scotchman in similar industries at home, and so on. For greater refinement of comparison in the consumption of food, 1,613 families were selected, consisting of a husband and wife only, or husband and wife with 1, 2, 3, 4, or 5 children under 15 years of age, and reduced to common measures of consuming power. The elementary stage of these comparisons is evident in the variations which obtain among different inquirers. Thus Mr. Atkinson's simple rule of thumb takes 2 children as equal to 1 adult. Mr. Booth takes the age as his figure, with a maximum of 20 for men and 15 for women. Dr. Engel starts with unity, and adds $\frac{1}{10}$ for each year of age, women reaching their maximum at 20 years (3 units) and men at 25 (3.5 units). The United States report adopts the following basis:—

	Units.
To husbands is ascribed a consuming power equal to	100
„ wives.....	90
„ children from 11 to 14 years inclusive	90
„ „ 7 „ 10 „	75
„ „ 4 „ 6 „	40
„ „ 1 „ 3 „	15

On this basis the average expenditure for food is greater among European than American families of workmen in coal, steel, and iron ore, but less in coke, bar iron, and pig iron industries.

A yet closer comparison was made by confining attention to 636 of these selected families, excluding those with fewer than 3 children. Notwithstanding this assimilation, the comparisons show wide divergence. Taking at random the steel industry in Great Britain, we find the cost of food per 100 units is as low as \$25.82 in one family, and as high as \$148.36 in another.

⁴ "La Réforme Sociale." Paris. 1st and 16th January, 1893.

Taking all cases together, the British family at home has an income of \$522 against \$692 for a British family in the States, and spends for rent \$47·6 against \$79·3, food \$246 against \$283, clothes \$80 against \$132, books and papers \$6 against \$7, alcohol \$24 against \$23, and tobacco \$12 against \$10. Total expenses, \$480 against \$627, leaving a surplus of \$42 at home (8·1 per cent.), \$65 in America (9·3 per cent.).⁵ To some of these results I shall presently return.

The fourth and last example of the wholesale collection of budgets to which reference can be made here is the inquiry by the Belgian government into the wages and budgets of Belgian workmen in April, 1891, of which some account was given in this Society's Journal for December, 1892 (page 686). The budgets, which are for one month only (the month of April), number 188. They were obtained through the agency of the newly created labour councils, to which the printed schedules were sent by the government. The returns appear to me to leave much to be desired: skilled personal supervision was wanting, the inquiry was conducted with too much haste, and the schedules themselves were not quite judiciously planned. Workmen were asked, *e.g.*, for estimates of their losses by gaming throughout the year, and of expenses through pawning and pledging, one-twelfth of the total to be set down to April under the head of "luxury." Here again more success may be expected from a second attempt. The country of Ducpétiaux can hardly remain satisfied with this sort of budget, closely though it follows his own in form. A few examples culled at hazard and compared with the American inquiries do not inspire much confidence.

Passing now to the intensive budget initiated by Le Play, it may be convenient to explain that his method consisted in selecting a typical working class family and describing it minutely:⁶ its composition in age and number, its history, geographical, social, and industrial environment, property, housing, hygiene, occupations, incomes from different sources, detailed expenditure, mode of life, hours of meals and repose, recreation, education, habits, morality, thrift, and social prospects, with almost every fact susceptible of statistical measurement under any of these heads. The central features of this monograph—the statistics of receipts and expense for the year—are the family budget. The description which clusters round, and is ultimately referable to, these statistics, helps us to get behind the figures and see what they really mean.

The ideal family for the purpose of this microscopic study is

⁵ "La Réforme Sociale." *Id.*

⁶ "Les Ouvriers européens." Paris, folio, 1855; 2nd edit., 6 vols. 8vo., 1877-79.

that represented by the greatest ordinate mean—in less technical terms the family which has the greatest number of other families similar to it in the field of choice. The selection of such a typical family in practice is necessarily a matter of judgment and discretion.⁷ Le Play's custom was to seek the advice of some local authority. In England he was fortunate enough to secure the co-operation of Mr. G. R. Porter, of the Board of Trade.

Having selected a family, his next course was to live in it or near it for some weeks, closely examining its receipts and expenses, its capital and mode of life, and describing it with the same care and interest which scientists have lavished upon ants and plants. Le Play's great experience, joined to those qualities which enabled him to organise the Paris Exhibitions of 1855 and 1867, allowed him to classify his observations in a uniform table, which subsequent inquirers have for the most part been content to follow with little if any modification. The honesty, accuracy, and completeness of his budgets have never, I believe, been disputed.

A by-gone fellow of the Society, Mr. W. L. Sargant, whose interesting writings deserve to be better known, based his "Economy of the Labouring Classes," 1857, upon Le Play's work, which he describes as "very admirable." "I was," he says, "not fully aware of the great value of his book at first, but when I afterwards renewed my acquaintance with other authors, Malthus, Arthur Young, &c., with the intention of comparing their labours with his, I felt the inferiority of theirs both as to fulness and precision.

"Malthus read very widely and carefully in order to illustrate and enforce his principles. He also travelled into several European countries with the express object of obtaining information. Arthur Young personally explored several countries very carefully, and having looked at everything with the eye of a practical farmer, recorded his observations with great precision. But neither Malthus nor Arthur Young penetrated far below the surface. Malthus had no means of visiting the log house of the Norwegian peasant or of the Russian serf. Arthur Young saw the outside of the French cabin, and shuddered at the rags and dirt of the peasant; but he did not get much beyond this. M. Le Play's proceedings were of a very different character."

It is not possible within the limits of this paper to give an example of Le Play's work. The *Société d'Économie Sociale*, which he founded in 1855, publishes a workman's budget every quarter; and M. Urbain Guérin's recent study⁸ of a tanner's

⁷ See "Giornale degli Economisti," October, 1892, prefatory note to the interesting budgets compiled by the Contessa Pasolini.

⁸ "Les Ouvriers des deux Mondes," tome iii, 2^e série. Paris, 1892.

family at Nottingham may be accepted as a good specimen of the method, but as it fills fifty-six closely printed octavo pages I am compelled to pass on to consider the statistical importance of such human documents, after observing that the budget should always cover a whole year, in order to include the effect of all seasons upon consumption and (through industry) upon income, and that the best of estimates is markedly inferior to an actual record, carefully kept, under supervision, when such a record can be obtained.

In the first place, it may be boldly affirmed that the "intensive" budget is the best possible education for those who would prepare or even make use of the large scale statistics of the "extensive" class. Take, for instance, the returns of rents in London quoted above. It is true, as Dr. Ogle says, that a general figure like Engel's cannot hold for the extremes of rural districts and large towns, and that "averages are like army clothing, which does for "everybody but fits no one." But anyone who has studied the intimate life of a London workman will at once inquire in how many of the 21,443 cases "rent" means "rent and nothing else." Adam Smith's experience is perhaps worth quoting: "There is no "city in Europe, I believe, in which house rent is dearer than in "London, and yet I know no capital in which a furnished apartment can be hired so cheap." No doubt many things have happened since 1776; but the hire of a furnished apartment may easily figure as rent in the returns especially of the 2,297 single men, and may even include a charge for some household services; rates and taxes will probably also be included; possibly in some cases there is an under tenant or lodger whose rent is not set off; and lastly the returns may be of rent due rather than of rent paid. Evictions and evasions are not uncommon in London among the comparatively poor, and tend to penalise the honest tenant by increasing the element of insurance against risk on the landlord's part, while the reckless tenders of the insincere help further to maintain rents at an inflated level. In villages and small towns these evils are not so great.

Or again, to refer to the United States returns, how far are we justified in regarding the frequent "surplus on hand" as an indication of annual saving? May it not sometimes be a mere cash balance unaugmented from year to year, and is not the excess of income over expenditure frequently rather "unaccounted for" than a surplus? It is almost impossible in drawing up a budget by estimates to exhaust the items, small in themselves, which cause so much leakage in the crazy finance of a workman's family. Even the American workman's wife, whose genius for house management is exhibited in her playful letter printed in the Commissioner's

report, is unequal to such an estimate. She writes: "The management that 'maintains a six dollar house on four dollars' will not conform to statistics." . . . As for the cost of food, "I should like to shake hands with the person who can reduce it to figures. . . . The 'incidentals' are interminable. Stamps, writing material, thread, needles, buttons, pins, lamp flues; in fact everything, from car fare uptown on a rainy day, and a bottle of Castoria for baby, to ammonia and carpet tacks during house cleaning." The extensive budget can hardly aim at much more than a cash account. Yet surely the well-being, absolute or relative, of a family depends also very much upon its capital. Two families have pretty nearly the same weekly income, and spend it all in much the same way; but one has good furniture, good store of household linen, and a more or less regular reserve of cash in hand; while the other has not these sources of comfort. Yet the extensive budget will hardly distinguish between the two. Neither does it reveal the fluctuations in comfort hidden from view in its grand totals, nor specify precisely those additions to the family income whose quality is often more important than their value, nor allow for those products which are consumed in kind and avoid expense—the milk and butter of the cow, the vegetables and fruit of the garden. If I do not pursue the list further, it is because I am anxious not to disparage in any way the great value of these general statistics, or the security afforded by large numbers, but merely to urge that they should be supplemented by some one or two minutely finished reports enabling us to see the economic life of a family steadily and see it whole. This is the more indispensable where we are asked to compare the standards of comfort of people who live under widely different political and social circumstances, in different places, or at different times.

The luminous letter just quoted will serve as a fragment of a minuter record to illustrate this point. The prices of food stuffs in the letter compare favourably with English prices. But "barbering, \$10 a year" (hair cutting 25 c., shaving 10 c.), affords us the only indication in the whole report that command over commodities does not bear the same relation to command over personal services in the old world and the new. \$10 is three or four times as much as a similar family would spend for similar services in this country.

One useful and practical purpose to which the study of workmen's budgets might be applied, is the construction of a weighted index number to test local variations in the purchasing power of a workman's wage. Such variations are no longer submitted to as natural and inevitable like those of the weather; and there

is perhaps no more fruitful source of irritation in centralised administrations than a real or fancied inferiority in privileges to those with whom equal rights are claimed. To circumvent variations of price in such cases we need to have variations of wages. The Post Office is an example of this on the largest scale. According to the estimates recently presented to Parliament, there are no fewer than twenty scales of pay for postmen in different parts of the United Kingdom. Rural postmen, of course, have journeys of different lengths, but the town postman's work is much the same everywhere, and it is only equitable that he should have an equal command of the necessities and comforts of life in one town and another. In Paris additional wages of 200 frs. a year to women telegraphists, 150 frs. to urban, and 100 frs. to suburban postmen, have just been granted as a first recognition of a similar principle. The railway men in England are pressing for a more nicely graduated scale of pay than the mere distinction between "London" and "country" rates. Soldiers serving abroad sometimes complain of diminished purchasing power as an added discomfort to foreign service. It is necessary, I am told, to adjust the salaries of bank clerks to the altered cost of living when they are removed to certain branches. And with the extension of large scale businesses and limited liability companies, cameralistic statistics may more and more be based in the last resort on the family budget. The index number of a workman's budget would offer many interesting points of comparison with that of Mr. Sauerbeck. It would serve to show, *e.g.*, to what extent a fall of wholesale prices, sufficient to discourage enterprise and depress industry, affects the sluggish prices of the consumer. Certain it is that a housewife who never buys more than a quarter of a pound of sugar at a time, pays as much when sugar is at $2\frac{1}{2}d.$ as when it is at $3\frac{1}{2}d.$ or $4d.$ per lb., and that the rounding off of the fraction against every consumer becomes proportionally more serious as prices fall. I am not unaware of the encouragement which this might be supposed to afford to buying in larger quantities, but to this there are often in humble households two limitations—the lack of store room, of coal-cellar, or of cupboards, and the absence of self control on the part of husbands and children, whose appetites, it appears, are liable to be stimulated by the presence of abundance, to the woeful derangement of the family budget. Similar limitations sometimes determine the purchase of one commodity where another would otherwise have been chosen.

Forces are no doubt at work to remove or diminish certain inequalities in price. Markets are better organised, and competition is in many respects more effective. But the causes which

make coals two or three times as dear in one place as another are very stubborn, and growing activity in local government—in county, municipality, or parish—is likely to result in even wider divergencies of rates than exist at present. Another fact borne in upon the compiler of workmen's budgets is the influence of the gradation of society upon the price of meat. Nothing at first sight may seem simpler than to say whether meat is cheaper or dearer in this place or in that; but in fact the retail price of meat is by no means easily compared. Not to mention difficulties due to differences in quality, or to different modes of cutting up the carcase, we are confronted by a beautiful example of the economic theory of joint supply. The theory, usually illustrated by beef and hides, or mutton and wool, holds of course equally well for the different parts of the carcase itself. Where the demand, say, for mutton is mainly for legs or cutlets, these will be high priced relatively to the inferior joints, which must be offered at a low price to be got rid of at the same pace. And so it happens that in wealthy neighbourhoods the least esteemed meat is often cheaper than elsewhere, while the best is dearer. Thus on Wednesday, the 19th of April, 1893, the following retail prices for home grown meat were obtained from two London houses, the first in a lower middle class suburb, the second in a more aristocratic quarter, where the poor consumer would hardly be found :—

	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
Beef—				
Rump steaks	1	2	1	2
Shin with bone	—	7	—	6
Mutton—				
Loin chops	1	—	1	2
Neck	—	9	—	7½
Breast	—	4½	—	4

Even here, however, the best parts of an animal may be sold in the west, and the rest of the same carcase in the east of London. For more striking examples we must compare the smaller towns. In his “*Science of Nutrition, 1892*,” Mr. Edward Atkinson refers to “the immense economical and hygienic blunder” of a coal porter who lodged and clad his family ill in order that they might have “the best of flour, the finest sugar, the very best “quality of meat.” In the circumstances the condemnation is well deserved, but in the face of the reasons just mentioned, there seems little room for general propositions whether the best is cheapest or the cheapest is best, apart from the particular market dealt in.

Enough has perhaps been said to show that certain local varia-

tions in the cost of living are of an abiding character. Not the least useful of the further services which family budgets can render is the measure which they afford of sæcular variations in the standard of comfort, and—the supreme concern of statistics—the progress in the welfare of the people at large.⁹ Yet again, they are indispensable to any thorough examination of the incidence of taxation, particular or general, relative or absolute, in the different strata of society, though for this we need to travel beyond the workman's budget, and obtain those also of the well-to-do. M. Leroy-Beaulieu has afforded a specimen of this application in his "*Traité de la Science des Finances*," and the valuable materials which are being collected by the veteran inquirer Dr. Engel will probably admit of similar uses. The collection of budgets by the governments of the United States and of Belgium was indeed provoked by home or foreign tariffs, the United States' Commissioner being enjoined by law to ascertain . . . the cost of producing articles, *at the time dutiable in the United States*, in leading countries where such articles are produced; while the royal decree convoking the Belgian Labour Councils calls upon them to furnish "workmen's" budgets, in view of the questions raised by the termination of "the commercial treaties." The urgency of the situation is alleged as one of the reasons for the short period of observation covered by these budgets.¹⁰

It seems proper here again to point out a difference between the extensive and the intensive budget. The first of these would have no indication of the cruel burden of conscription, without which a comparison of taxation between English-speaking peoples and those on the continent can hardly be otherwise than misleading. Nor do these general statistics appear to take account of indirect taxation. It is only necessary to look at the columns for food, taxes, tobacco, and intoxicating liquors in the summary of the United States returns above, to see that the return of taxes has been most imperfectly worked out for the component parts of the United Kingdom, even when allowance is made for the very small number of families upon which the averages are based. It must in fairness be remembered that the primary purpose of the American report is to ascertain cost of production, efficiency of labour, and real wages, rather than to deal exhaustively with social conditions. But it is now many years since General Walker's classical work on *The Wages Question* in its careful enumeration of the causes of the efficiency of labour included, besides diet, "habits,

⁹ Ducpétiaux's budgets offered the Belgian Government a rare opportunity for this purpose.

¹⁰ See the interesting account by M. A. Julin in "*La Réforme Sociale*," Paris, 16th October, 1892.

“voluntary or involuntary, of cleanliness of the person, and purity of air and water,” and many others which could only receive attention in the supplementary intensive budgets already suggested.

If I go on to suggest that family budgets would promote family economy, I begin to tread on dangerous ground. News comes to me from an able economist and statistician in a distant part of Europe, that his efforts to collect family budgets from a factory population gain ground very slowly. “Many people,” he writes, “talk about it as being a ‘stomach-policy’ of the *bourgeoisie*, whereby the bad management of the working classes should be demonstrated.” It is no doubt galling to be taught the art of living upon a small income by those who have never tried it. But the temptation to say that the incomes of the working classes might often be easily made to go further is almost irresistible. Something of the kind appears to have been in Adam Smith’s mind when he argued that if a workman’s family can be maintained in winter when wages are lowest and the cost of living is highest, the family must be in tolerable comfort in summer when wages are highest and expenses lowest; or that if “the labouring poor can maintain their families in dear years, they must be at their ease in times of moderate plenty, and in affluence in those of extraordinary cheapness,” when money wages remain the same; or again, if they can subsist “in those parts of the kingdom where the price of labour is lowest, they must be in affluence where it is highest,” having regard to the fact that bread and butcher’s meat, sold by retail, “are generally fully as cheap, or cheaper, in great towns than in the remoter parts of the country.” Without denying that there is any force in these arguments, the student of workmen’s budgets will probably feel that they are somewhat aloof from the facts, and that it would, for example, be more correct as regards many families to say that, having no plethora of comfort in summer, they suffer privation in winter such as could not be continuously maintained all the year round without serious deterioration. A sufficiency of nutrition as an element in the efficiency of the present and the quality of the future race can hardly be over rated. A further relation between necessary food and necessary clothing has often been observed. Sargent, himself a sympathetic employer of labour, says “I cannot help suspecting that working men do themselves some injury by a want of care as to wearing sufficient clothing. They are not aware that the absence of an overcoat makes a greater quantity of food necessary to supply the additional waste of internal fuel. When I see them with their hands in their pockets and their shoulders up to their ears bending forward

“to the cruel east wind, I regret that they have not prudence enough to keep a heavy overcoat for the winter; it would cost no great deal and would last many years. It would save them from much pain, from some indisposition, and would probably be very economical in its results.” General Walker carries this connection so far as to base upon it the following argument: “If necessary wages, called 100, be made up of dear food 90, and cheap clothing 10, is it not the same in the result as if the constituents were cheap food 80 and dear clothing 20? And, if famine comes, does not the possibility of going down from dear clothing to cheap clothing—from woollen, say, to cotton, or from flax to cotton—afford a margin, just as truly as the substitution of cheap for dear food?” To both these questions a workman’s budget would suggest decided negative answers. The expenditure for clothing is not so considerable as that for food, and while new supplies of food are needed every day, new supplies of clothing are comparatively rarely needed, and in times of famine might be indefinitely postponed. Thus F. W. Newman notes that clothes have been known to fall in price during the period of a famine. In all these matters, too, account must be taken of differences of climate. Thackeray compares poverty to frost, in so far as it begins to attack a man at the extremities. He had in view the forlorn dandies whose hats and gloves have ceased to be irreproachable; but the same comparison applied to the boots of the working classes in a climate like ours, affords another illustration of the truth that nothing is so ruinous as to be short of money, and shows that where broken boots may easily lead to broken health, to be well shod must take a different place in “the natural order of wants” than it does in the sunny south.

The promotion of domestic economy through the family budget might arise partly from a continuance of the habit of keeping accounts within the family—conducive to regularity, foresight, and self control—partly from the influence of science or art entering from without. Upon the first of these points some light is thrown by a remark somewhat boastingly made to me by a workman that, unlike most men, he “lived as well on a Friday as on any other day of the week.” On the second point we are probably upon the threshold of considerable progress. Nothing is so striking in the comparison of intensive budgets as the importance of good housewifery, which is often sufficient to turn the balance of comfort in favour of one workman whose wages are much below those of another. The utilisation of waste opens of itself a wide field of possibilities. To mention two trifling examples, the tender shoots of the hop, which are pruned and thrown away in Kent, are the choicest delicacies in Paris; while the thrifty peasants

of western France, with their frugal, monotonous fare, refuse to recognise the abundant blackberry as an article of food. So far as possible economies in the art of cooking are concerned, I must be content to refer, for illustration, to the brightly written "Science of Nutrition" of Mr. Edward Atkinson, whose "mission," in his own words, "appears to be to overcome the *inertia* of woman, a "very hard piece of work."

The value of the services of women at home is statistically measured with great nicety by Le Play in his workmen's budgets. There seems to be a growing volume of opinion that the services of the workman's wife are, even economically, more valuable at home than they are elsewhere. It is noteworthy that the workmen's wives were specially recognised as a serious factor in the recent strikes at Carmaux in France, and Saarbrück in Germany. They were harangued in special women's meetings, and excited to use all their efforts as chancellors of the domestic exchequer to support the war, and not to dishearten the warriors.

It is not possible to dilate here upon the services which these statistics are capable of furnishing to the consumption of wealth as a department of economic theory. The workman's budget is for this purpose a most important beginning. His "short and simple" annals of income and expense are less disturbed by visitors, by costly hospitality, and the other complexities which surround us when we try to unravel the consumption of food in the wealthier families. Nor can I do more than refer in passing to the manner in which Malthus, relying upon the statistics of Eden's budgets, victoriously assailed the position of Adam Smith, that a bounty cannot raise the real price of corn to the labourer.¹¹

The study of the family as a factor in society is no less important to the student of economics and of social statistics than a knowledge of the strength of materials is to the engineer. In the family we see indeed the very structure and texture of society itself. Without the organisation of the family society could hardly have been built up. We have yet to see how far its change from a little monarchy to a yet smaller republic may affect the social fabric as a whole. I can think of nothing so nearly answering to our President's ideal of socialism in the arms of individualism as this natural, mutual, benefit and insurance society, by whose *vis medicatrix* so many of the ills of the body politic are dispelled. To quote the language of Cobbett's "Cottage Economy," 1822, children "become very soon so many assistants and props to the parents, who, when old age comes on, are amply repaid for all the toil and all the cares that children have occasioned in their infancy. To be without sure and safe friends in the

¹¹ "Observations on the Corn Laws, 1814," pp. 5, 6, and 31.

“ world makes life not worth having; and whom can we be so
“ sure of as our children? Brothers and sisters are a mutual
“ support. We see them in almost every case grow up into
“ prosperity when they act the part that the impulses of nature
“ prescribe. When cordially united a father and sons or a family
“ of brothers and sisters may in almost any state of life set what
“ is called misfortune at defiance.” Such considerations have a
not remote bearing upon the problem of the Aged Poor.

Finally, is it too much to suggest that this subject might afford profitable exercise for the scattered Fellows of this Society, each in his own neighbourhood, to contribute something towards the completer statistical knowledge of our country? It is given to few individuals to combine the qualities and resources necessary for conducting over large areas an extensive inquiry into workmen's budgets. An undertaking so important and so elaborate may fitly be looked for from official sources. For this reason I have laid stress rather upon the value of completer study of a few single instances, such as are probably within the reach of every one of us. The natural sciences have made immense progress by following these paths of observation and classification. We may not hope for a statistical survey commensurate in fulness with the geological survey, but it would be an enormous advantage if the same local and private interest were taken in statistics as in geology, botany, or archæology. A family complete within itself is a unit for observation, small enough and compact enough even for those of very limited leisure. It is now a hundred years ago since Eden sent a “remarkably faithful and
“ intelligent person ” to collect information from different parishes upon the “earnings and expenses of a labourer's family
“ for a year, distinguishing the number and ages of the family,
“ and the price and quantity of their articles of consumption.” The object of this paper will be attained if at some future meetings of this Society “faithful and intelligent” Fellows may be found to show us the results of similar inquiries at the present time.

A bibliography of the subject is appended to the work of MM. Cheysson and Toqué in the *Bulletin de l'Institut International de Statistique*, tome v, 1890. This has been brought up to date by M. Ch. Landolt in the *Bulletin*, tome vi, 1892. A short history of the method, and a dissertation on the subject, are contained in the *Handwörterbuch der Staatswissenschaften* of Conrad, s.v. *Konsumtion*, by Dr. S. Bauer.

APPENDIX.

I.—*Expenses and Earnings of the Family of a Labourer, by the Week and by the Year. Parish of Barkham, Berks. Collected at Easter, 1787; first printed in June, 1788.*

[Extracted from DAVIES'S *The Case of Labourers in Husbandry*, 1795, p. 136.]

		Five Persons.*		
Expenses per Week—		£	s.	d.
Bread or flour		—	3	9
Yeast and salt		—	—	3
Bacon or other meat		—	1	8
Tea, sugar, butter.....		—	1	—
Cheese (seldom any)		—	—	—
Beer „		—	—	—
Soap, starch, blue.....		—	—	6
Candles		—	—	3
Thread, thrum, worsted		—	—	3
Total		—	7	8
Amount per annum		19	18	8
<hr/>				
Earnings per Week—				
The man earns at a medium		—	8	—
„ woman		—	1	—
„ children.....		—	—	—
Total		—	9	—
Amount per annum		23	8	—
<hr/>				
To the above amount of expenses per annum	}	19	18	8
Add rent, fuel, clothes, lying-in, &c.....		6	—	—
Total of expenses per annum		25	18	8
„ earnings „		23	8	—
Deficiency of earnings.....		2	10	8

* A man, his wife, and three young children, the eldest 6 years of age, the youngest an infant.

		£	s.	d.
Price of the half-peck loaf of wheaten bread	}	—	—	11½
Price of the gallon of flour.....		—	—	10
„ a week's labour in winter.....		—	7	—
„ „ where the labourer is employed constantly, all weather, the year through	}	—	8	—

I.—*Expenses and Earnings of the Family of a Labourer—Contd.*

ANNUAL EXPENSES IN THE PARISH.

	Five Persons.
	£ s. d.
Rent of a cottage and garden, from 1 <i>l.</i> 5 <i>s.</i> to 2 <i>l.</i> 2 <i>s.</i> , say.....	1 10 -
Fuel, if bought, costs 12 <i>s.</i> , but reckoned here at a week's wages, because a man can in a week cut turf enough on the common to serve the year, and the farmers give the carriage for the ashes	- 8 -
Clothing.—The man's: wear of a suit, per annum, 5 <i>s.</i> ; wear of a working jacket and breeches, 4 <i>s.</i> ; two shirts, 8 <i>s.</i> ; one pair of stout shoes, nailed, 7 <i>s.</i> ; two pairs of stockings, 4 <i>s.</i> ; hat, handkerchief, &c., 2 <i>s.</i> Sum, 1 <i>l.</i> 10 <i>s.</i> The woman's: wear of gown and petticoats, 4 <i>s.</i> ; one shift, 3 <i>s.</i> 6 <i>d.</i> ; one pair of strong shoes, 4 <i>s.</i> ; one pair stockings, 1 <i>s.</i> 6 <i>d.</i> ; two aprons, 3 <i>s.</i> ; handkerchiefs, caps, &c., 4 <i>s.</i> Sum, 1 <i>l.</i> But as few poor people can every year bestow on themselves the sums here supposed, let the children's clothing (partly made up of the parents' old clothes, partly bought at second-hand) be included, and the whole estimated at	2 10 -
Lying-in, sickness, and loss of time thereby; burials, and loss of time by extreme bad weather; estimated, one year with another, at.....	1 12 -
	<hr/> 6 - - <hr/>

Rent, fuel, clothing, lying-in, &c., are set down in the columns at 6*l.* to every family alike, because it is the *least* sum at which those articles can well be reckoned.

The tea used per family is from 1 to 1½ oz. per week, at 2*d.* per oz.

Soft sugar, ½ lb., at 7*d.* to 8*d.* per lb.

Salt butter or lard, ½ lb., at 7½*d.* to 8*d.* per lb.

Poor people reckon cheese the dearest article they can buy.

Malt is so dear, they seldom brew any small beer, except against a lying-in or a christening.

To eke out soap they burn *green* fern, and knead the ashes into balls, with which they make a lye for washing.

In the above budget the woman washes for one or two single labourers, for which reason 6*d.* is charged for soap.

II.—*Expenses and Earnings of Family of Agricultural Labourer by the Week and by the Year.* ELSFIELD, OXFORDSHIRE.

[Extracted from Sir F. M. EDEN'S *State of the Poor*, 1797, vol. iii, p. 348.]

	Five Persons, 1795.		
	£	s.	d.
Expenses by the Week—			
Bread, flour, or oatmeal	—	8	—
Heating the oven	—	—	—
Yeast and salt	—	—	—
Bacon or pork	—	1	6
Tea, sugar and butter	—	—	8
Soap	—	—	—
Candles	—	—	8
Cheese	—	—	—
Small beer.....	—	—	2
Milk	—	—	—
Potatoes.....	—	—	—
Thread and worsted.....	—	—	6
Total of the week	—	11	6
„ per annum	29	18	—
Earnings per Week—			
The man	—	9	—
„ woman	—	1	6
„ children	—	—	—
Total of the week	—	10	6
Extra earnings in harvest	—	—	—
Amount per annum	27	6	—
To the amount of expenses per annum....	29	18	—
Add rent	1	10	—
„ fuel.....	—	—	—
„ clothes	1	16	—
„ births, burials, sickness, &c.	—	—	—
Total expenses per annum	33	4	—
„ earnings „	27	6	—
Deficiency	5	18	—
Exceedings	—	—	—

Man 34, woman 33, eldest child 8, youngest 2. Man a shepherd, woman spins. Their bread is three-fourths barley, one-fourth wheat. They often assist two children, who are out at service. They are considered as very frugal.

III.—*Budget for a Year of an Agricultural Labourer near GHEENT.*

[Extracted from the *Budgets économiques des classes ouvrières en Belgique*,
p. 37. By E. DUPETITATX, 1855.]

(A.) EXPENSES.

I.—*Expenses of the physical and material order.*

	frs.	c.
(a.) Food {		
Wheaten bread.....	15	60
Rye bread	141	44
Maslin bread	—	
Vegetables, potatoes	113	88
Meat	12	48
Milk, eggs, fish	30	68
Butter, oil, fats.....	60	32
Salt, pepper, &c.	16	12
Tea, coffee, chicory	22	88
Beer, cider, wines consumed } at home	—	
(b.) Lodging, showing the number of } rooms	43	68
(c.) Clothes. Distinguishing those of } the parents and children	42	64
(d.) Bedding	8	84
(e.) Heating	27	56
(f.) Lighting	11	44
(g.) Washing.....	7	28
(h.) Hygiene and cleanliness, baths, &c.	—	52
(i.) Medical attendance	5	20
(j.) Repairs of the house, insurance	1	56
(k.) Purchases and repairs of furniture	6	24
(l.) Rates and taxes.....	—	
(m.) Stamps and petty expenses	—	52
(n.) Expenses connected with industry } (excluding the cost of raw } material)	5	20
(o.) Expenses of the garden	4	68
Total.....	578	76

III.—*Budget of an Agricultural Labourer near GHENT—Contd.*

II.—*Expenses of the religious, moral, and intellectual order.*

	frs.	c.
(a.) Expenses of worship	—	52
(b.) School expenses of children.....	—	
(c.) Expenses of apprenticing children....	2	08
(d.) Purchase of books, prints, &c.....	—	
(e.) Subscriptions of a moral, intellec- tual, or religious object	—	
(f.) Subscriptions to mutual aid } societies, provident societies, &c. }	—	
(g.) Deposits in savings bank	—	
Total.....	2	60

III.—*Expenses on luxury, or resulting from improvidence.*

	frs.	c.
(a.) Frequenting the public house, coffee } tavern, and consumption of fer- mented and spirituous drinks.... }	1	56
(b.) Tobacco	4	68
(c.) Losses at games (gambling), lotteries	—	
(d.) Toilet ornaments	—	
(e.) Theatres	—	
(f.) Public holidays and festivals	—	
(g.) Loans and pawn expenses	—	
Total.....	6	24
Total EXPENSES	587	60

(B.) INCOME OR ANNUAL RESOURCES of the Family.

	frs.	c.
Wages of the head of the family	302	63
„ mother	28	29
„ children	150	71
Other income	61	66
Total INCOME	543	29

IV.—*Budget of the Year's Expenses of a Sheffield Cutler. Family of Man (aged 38), Wife (38), and Four Daughters (10, 7, 5, and 2). Another Daughter, aged 16, is Employed in a Dressmaking Business carried on by Relations, with whom she lives.*

[Extracted and much condensed from a budget of LE PLAY, 1851,
Les Ouvriers Européens, 1855, p. 197.]

	Weight. Kilo- grammes.	Price per Kilo- gramme.	Total Expenses.	
			Value of Goods Consumed in kind.	Money Spent.
I. FOOD.				
(a). Food consumed at home.				
CEREALS—Flour	577·0	frs. c. — 350	frs. c. —	frs. c. 201 95
Oatmeal.....	9·0	— 280	—	2 52
Rice	23·0	— 690	—	15 87
Total weight and average price....	609·0	— 362	—	—
FATS—Butter	8·0	3 220	—	25 76
Lard, &c.	12·0	1 380	16 56	—
Total weight and average price....	20·0	2 116	—	—
MILK and EGGS—Milk (new, 104 litres } @ 18 c., skimmed, 208 litres @ 9 c.) }	312·0	— 135	—	37 44
Cheese	3·0	1 380	—	4 14
Eggs	8·0	1 530	12 24	—
Total weight and average price....	323·0	— 167	—	—
MEAT and FISH—Beef, mutton, veal	140·0	1 270	—	171 32
Pork, bacon, ham, &c.	76·0	1 080	31 40	50 68
Fish	1·0	1 380	—	1 38
Total weight and average price....	217·0	1 030	—	—
VEGETABLES and FRUIT—Potatoes	362·0	— 130	—	26
Cabbages, beans, peas.....	169·0	— 113	—	22
Carrots and turnips.....	40·0	— 100	—	4 00
Onions	12·0	— 320	—	3 84
Lettuce, cress, celery	72·0	— 175	3 29	9 31
Cucumbers	2·0	— 210	—	— 42
Apples, pears	66·0	— 260	17 16	—
Currants, gooseberries	12·0	— 620	7 44	—
Total weight and average price....	735·0	— 152	—	—
CONDIMENTS and STIMULANTS—Salt	17·0	— 065	—	1 10
Pepper, &c.	0·3	4 167	—	1 25
Vinegar	1·0	0 620	—	— 62
Sugar.....	49·0	1 141	—	55 89
Coffee and tea	7·5	4 408	—	33 06
Total weight and average price....	74·8	1 229	—	—
FERMENTED DRINKS—Beer (porter)	11·0	— 368	—	4 05
Treacle beer and ginger beer.....	193·5	— 058	18 72	— 78
Total weight and average price....	204·5	— 115	—	—

IV.—*Budget of the Year's Expenses of a Sheffield Cutler—Contd.*

	Total Expenses.	
	Value of Goods Consumed in kind.	Money Spent.
	frs. c.	frs. c.
(b.) Food consumed away from home	—	—
Total expenses on FOOD	106 81	691 66
II. DWELLING EXPENSES.		
LODGING—Rent (less the rent—31 frs. 25 c.—of the garden)	—	179 25
FURNITURE—Purchases, 2 frs. 50 c.; sewing done gratis } by relations, 2 frs. 50 c.	2 50	2 50
HEATING—Coal, 6,510 kilos. @ 1 fr. 02 c. per 100 kilos.	—	66 40
LIGHTING—Candles, 15 kilos. @ 1 fr. 15 c.	—	17 25
Total DWELLING expenses	2 50	265 40
III. CLOTHES.		
WORKMAN'S CLOTHES	7 50	75 00
WIFE'S " "	10 00	37 50
CHILDREN'S (4) " "	12 50	115 44
WASHING (soap, 26 frs. 45 c.; soda, 1 fr. 44 c.; blue and } starch, 1 fr. 25 c.)	—	29 14
Total expense on CLOTHES	30 00	257 08
IV. INSTRUCTION, RECREATION, MEDICAL ATTENDANCE, &c.		
RELIGION	—	—
EDUCATION of three children (40 weeks' school, 25 frs.; } paper, pens, &c., 2 frs. 50 c.)	—	27 50
ALMS	—	3 75
AMUSEMENTS, &c. (keep of 12 canaries and 4 pigeons, } 50 frs.; toys, 3 frs. 75 c.; cakes, &c., at fairs, 2 frs. 50 c.) }	10 00	46 25
MEDICAL ATTENDANCE (club)	—	61 83
Total expenses on INSTRUCTION, RECREATION, } and MEDICAL ATTENDANCE, &c.	10 00	139 33
V. Expenses connected with BY-INDUSTRIES, DEBTS, TAXES, and INSURANCE.		
BY-INDUSTRIES—N.B. The expenses connected with <i>By-Industries</i> (pig, fowls, garden, manufacture of ginger-beer), amounting to 740 frs. 67 c., are covered by the profits, and the surplus carried to receipts.		
INTEREST ON DEBTS—5 per cent. on arrears of rent (un- } claimed)	11 85	—
20 per cent. on goods bought on credit, taking the } form of higher prices	—	12 50
RATES	—	6 25
INSURANCE—Sick club, accounted for above	—	—
Total expenses on BY-INDUSTRIES, DEBTS, } TAXES, and INSURANCE	11 85	18 75
SAVINGS during the year (applied to arrears of rent) ...	—	52 00
Grand total	161 16	1,424 22
		1,585 frs. 38 c.

V.—*Expenses of a Spring Knife Cutler at Sheffield.*[From Blue Book *Returns of Expenditure by Working Men*, C-5861, 1889, p. 25.]

Reference number	27		
District	Sheffield.		
	£	s.	d.
Nominal weekly wages	—	—	—
Actual weekly earnings	1	14	—
Hours worked per week		58	
Average overtime per week		—	
Lost time per year. Sickness		—	
" Want of employment	2	weeks	
" Holidays	4	"	
Average annual earnings, allowing for lost time		85	l.
Number of family. Boys		3	
" Girls		4	
Number at work, and		2	
Net yearly earnings		40	l.
Total yearly income of family		125	l.
Number of rooms occupied		4	
	£	s.	d.
Amount paid per year for rent	14	10	4
" water, rates, &c.	—	—	—
" week for fuel and light	—	2	6
" bread or flour	—	4	—
" oatmeal or rice	—	—	4
" butchers' meat	—	6	6
" bacon	—	—	8
" fish	—	—	2
" vegetables	—	1	3
" cheese	—	—	9
" butter	—	2	8
" milk	—	1	—
" tea	—	—	9
" coffee	—	—	2½
" cocoa	—	—	3½
" sugar	—	1	4
" salt and other seasonings	—	—	1
" pickles	—	—	—
" jam and treacle	—	—	2
" beer or other beverages	—	—	10½
" washing materials	—	—	4
" year for education	3	18	—
" week for books and papers	—	—	6
" year for recreation	5	—	—
" boots and clothing	20	—	—
" bedding, furniture, repairs	2	—	—
" friendly, trade or building }	4	6	8
society			
" medical attendance and }	1	10	—
drugs			
" travelling expenses	—	—	—
Total yearly expenditure at above rates	119	16	6
Surplus, or	5	3	6
Deficit /	—	—	—

Ages of children 17, 15, 13, 10, 8, 6, 2. Wages are above the average of the trade. Three children are at day school and three at night school. 2s. per week for cost of tools is included in total of expenditure. Savings are 5l. in bank, and 3l. in co-operative society. J. B[urnett.]

VI.—*Household Expenditure for Five Weeks of Railway Labourer, Wife, and Three Children (11, 9, 5).*

[Extracted from *Life and Labour of the People*, vol. i, p. 136. By Charles Booth, 1892.]

Number of full adults	3	
	<i>s.</i>	<i>d.</i>
Supposed income, five weeks	105	—
Per week, per adult	7	—
Expended in five weeks—		
Meals out	7	10
Meat	10	4
Liver, &c.	—	4
Potatoes.....	2	4
Vegetables.....	1	7
Fish	—	2½
Bacon, &c.....	—	10
Eggs	—	2½
Cheese	—	2½
Suet	—	2
Butter and dripping	3	1
Bread.....	11	3
Flour.....	—	7½
Rice, oatmeal, &c.....	—	11
Fruit, jam, &c.....	—	1½
Sugar.....	2	10
Milk.....	1	4
Tea.....	4	1
Coffee, cocoa, &c.	—	
Pepper, salt, &c.	—	1
Total of food.....	48	4½
Beer and tobacco	3	2
Fire and light	9	½
Rent	25	—
Washing and cleaning.....	1	6½
Clothes, &c.	—	10
Education, medicine, &c.	—	7½
Insurance, &c.	11	6
Total expended.....	100	1
Or per week	20	¼
Food per adult per week.....	3	2¾
Rent	1	8
Other expenditure (except clothes } and medicine)	1	8¾
Addition	6	7½
Price of bread (per quartern).....	—	4½
„ butter (per lb.)	—	8
„ tea „	2	—
„ sugar „	—	2
Number of purchases of tea	5	
„ articles of food	21	
„ other items,	12	

Remarks.—The husband takes 4d. a day for his dinner. Wife and children do not eat much.

VII.—*Income and Expenditure for a Year of a Coal Miner in Great Britain. Bituminous Coal. Cost of Living by Families.*

[Extracted from *Sixth Report of the Commissioner of Labor of the UNITED STATES, 1890.*]

A. DESCRIPTION OF FAMILY—		
Budget number	2,649	
Locality.....	Great Britain	
Nationality	English	
Occupation or condition of—		
Husband	miner	
Wife (whether at home or at work)	home	
Children (at work none, at }	3	
school 2, at home 1)		
Boarders	none	
Total persons in family	5	
B. AGE AND SEX—		
Age of husband	33	
„ wife	33	
Age and sex of children—		
First child	9, male	
Second „	5, female	
Third „	3, male	
C. SOURCES OF INCOME—		
Own house	no	
Income from occupation of—	\$	
Husband	478.64	
Wife	—	
Children	—	
Board and lodging	—	
Other sources	—	
Total	478.64	Cost.
D. EXPENDITURE FOR FOOD—		
	lbs.	\$
Beef	—	—
Hog products	—	25.30
Meat (not specified)	—	75.92
Eggs	—	12.65
Lard	26	3.16
Butter	78	18.98
Tea	26	12.65
Coffee	—	—
Sugar.....	104	4.22
Molasses	galls. —	1.58
Potatoes	bush. —	8.11
Poultry	—	—
Fish	—	—
Milk	—	16.87
Flour and meal	—	39.42
Bread	—	—
Rice	—	1.22
Cheese	—	—
Fruit	—	—
Vinegar, pickles, and condiments	—	—
Vegetables not specified	—	2.43
Food not specified	—	41.86
Total food.....	—	264.37

VII.—*Income and Expenditure of a Coal Miner in Great Britain—Contd.*

		Cost.
E. EXPENDITURE OTHER THAN FOR		\$
FOOD—		
Rent, rooms	3	—
" cost	—	40.06
Fuel, kind	coal	—
" quantity	—	—
" cost	—	12.16
Lighting, kind	oil	—
" quantity galls.	—	—
" cost	—	4.38
Clothing, husband	—	14.60
" wife	—	12.16
" children	—	9.73
Furniture and utensils	—	2.43
Taxes	—	—
Pit expenses	—	—
Insurance, property	—	—
" life	—	8.44
Organisations, labour	—	6.33
" other	—	6.33
Religion	—	—
Charity	—	1.46
Books and newspapers	—	1.46
Amusements and vacation	—	2.43
Intoxicating liquors	—	18.98
Tobacco	—	12.65
Sickness and death	—	1.05
Other	—	—
Total for year	—	154.65
F. CONTRASTED INCOME AND EXPENDITURE—		
Expenditure for—		
Rent	—	40.06
Food	—	264.37
All other purposes	—	114.59
Total	—	419.02
Income from—		
Husband	—	478.64
Wife and children	—	—
All other sources	—	—
Total	—	478.64
Surplus	—	59.62
Deficit	—	—
G. REMARKS, 2,649. Surplus in savings } bank ; house fairly furnished..... }		—

VIII.—*Income and Expenditure for Fifteen Weeks of a Slipper Maker in London. Family: Husband (38), Wife (37), Four Boys (11, 10, 6, 1), Two Girls (8, 4).*

[Compiled by Ernest Aves, M.A., 1893 (not before published).]

Average weekly expenditure for fifteen weeks (25th September, 1892, to 7th January, 1893)—			
	£	s.	d.
Bread	—	3	8½
Other cereals (including flour and biscuits)	—	—	4½
Butter, cooking oil, fat	—	1	4½
Meat and fish	—	3	5½
Milk	—	1	4
Eggs	—	—	4¼
Cheese	—	—	4½
Potatoes	—	—	6½
Other vegetables	—	—	2¾
Fruit (fresh and dried)	—	—	6¼
Sugar	—	1	½
Jam	—	—	7¼
Condiments	—	—	1
Total of food	—	14	—¼
Alcohol (beer)	—	—	11¼
Tea	—	—	4¾
Coffee	—	—	3¾
Cocoa	—	—	3½
Fuel	—	1	1½
Light	—	—	9½
Rent	—	10	—½
Washing and cleaning	—	1	4½
Pocket money (to children):	—	1	5½
Repayment of loans	—	1	6
Clothing and boots	—	1	4
Other expenses (house utensils, furniture, medicine, insurance, &c.)....	—	—	4¼
			1 13 11¼
Gross weekly income (fourteen weeks } from 2nd October, 1892)..... }	2	11	—
Deduct expenses of industry*.....	—	15	11¾
Net weekly income (fourteen weeks).....		1	15 —¼
Number of purchases of tea (fifteen weeks)			81
Weekly consumption of meat			3 lbs. 10 ozs.
Price of bread (per quartern)			4½d., 4¾d., and 5d.
„ sugar (per lb.).....			2¼d.
„ tea „			1s. 10d.
„ butter „			1s. 4d.
„ meat „			8d. and 9d.

* Material, completion of purchase money of sewing machine, occasional payments for extra help.

The family to which the above budget refers live in a small four-roomed house in east London. The husband was born in Germany, but was brought to England when about six months old. He was brought up in Manchester, but has been in London for many years. The wife was born in east London, her father being a foreigner and her mother English. The family are Jews. Five children are at school.

The father is an industrious worker, in busy times working as much as 80 hours a week ("13 and 14 hours a day are not considered long in our trade"). His employment comes chiefly from a single employer, for whom he has worked for eight years. When without employment, if sufficient funds are in hand, he buys his own material, and makes up to sell in the open market. Material thus bought accounts for a considerable part of the expenses of industry, but hemp, wax, cardboard, paste, sand paper, nails, emery cloth, &c., have always to be found by him, and are estimated to cost 5*d.* for each dozen pairs of slippers made. Prices paid for making range from 3½*d.* to 5¼*d.* per pair, and are declining.

The wife helps a little with the making and does the binding, but even when the husband is in full work her share is not valued at more than 2*s.* 6*d.* a week. Most of her time is taken up with domestic duties.

Most of the food is bought from a small neighbouring general shop, and high prices are knowingly paid for some articles, in view of the convenience of getting credit when hard times come round.

IX.—*Explanation of Charts.*

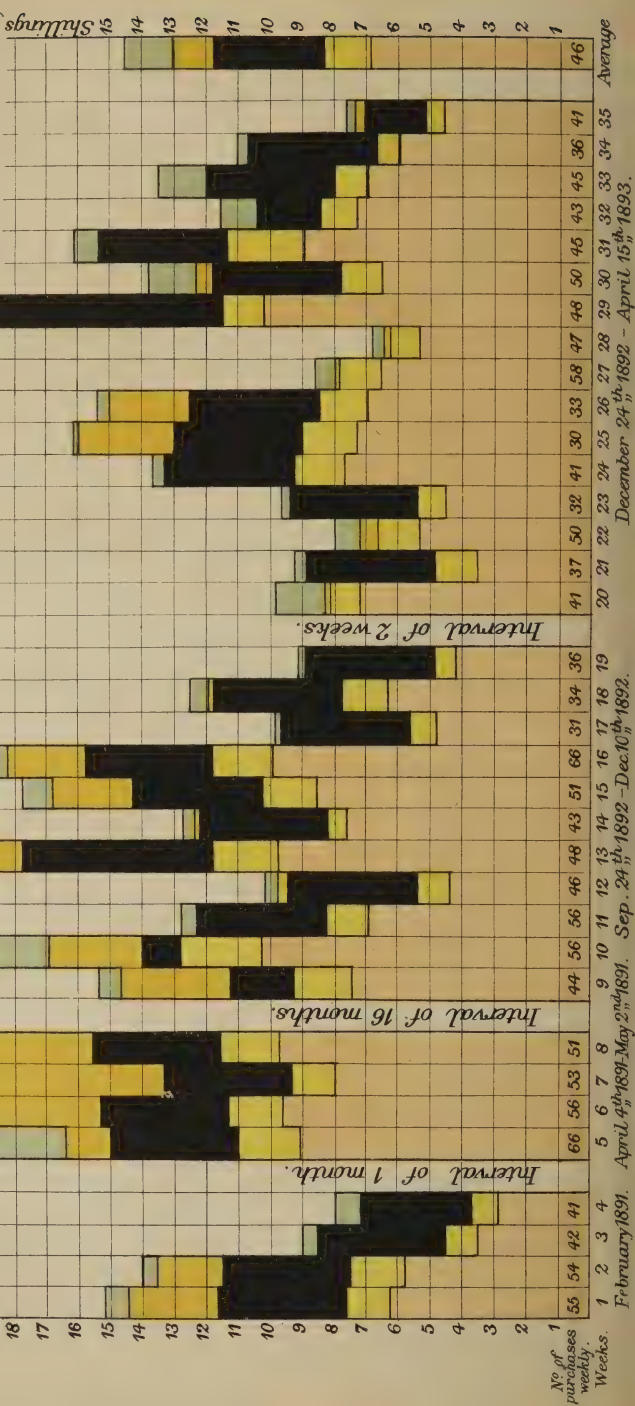
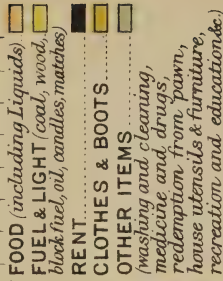
The head of the family is not a skilled workman, but is a survival of the "handy men" of some years ago, who turns his hand to plumbing, house painting, whitewashing, &c. During an interval of sixteen months, noted on the chart, another girl was born, whose age, in April, 1893, was one year and nine months, although she does not yet influence directly the consumption of food, not being weaned. The period of observation covers the reduction of 2*d.* a lb. in the duty on tea; this produced no effect upon the price per lb., which remained 1*s.* 2*d.*, though the woman (who did not know of the change) thought she had noticed an improvement of quality. Tea was not to be purchased at a lower price than 1*s.* 2*d.* before or after the change. The introduction of free education saved the family an expense of, nominally, 9*d.* a week. Coincidentally with, and apparently in consequence of this

CHART OF EXPENDITURE

JOBING PLUMBER SOUTH LONDON

35 WEEKS

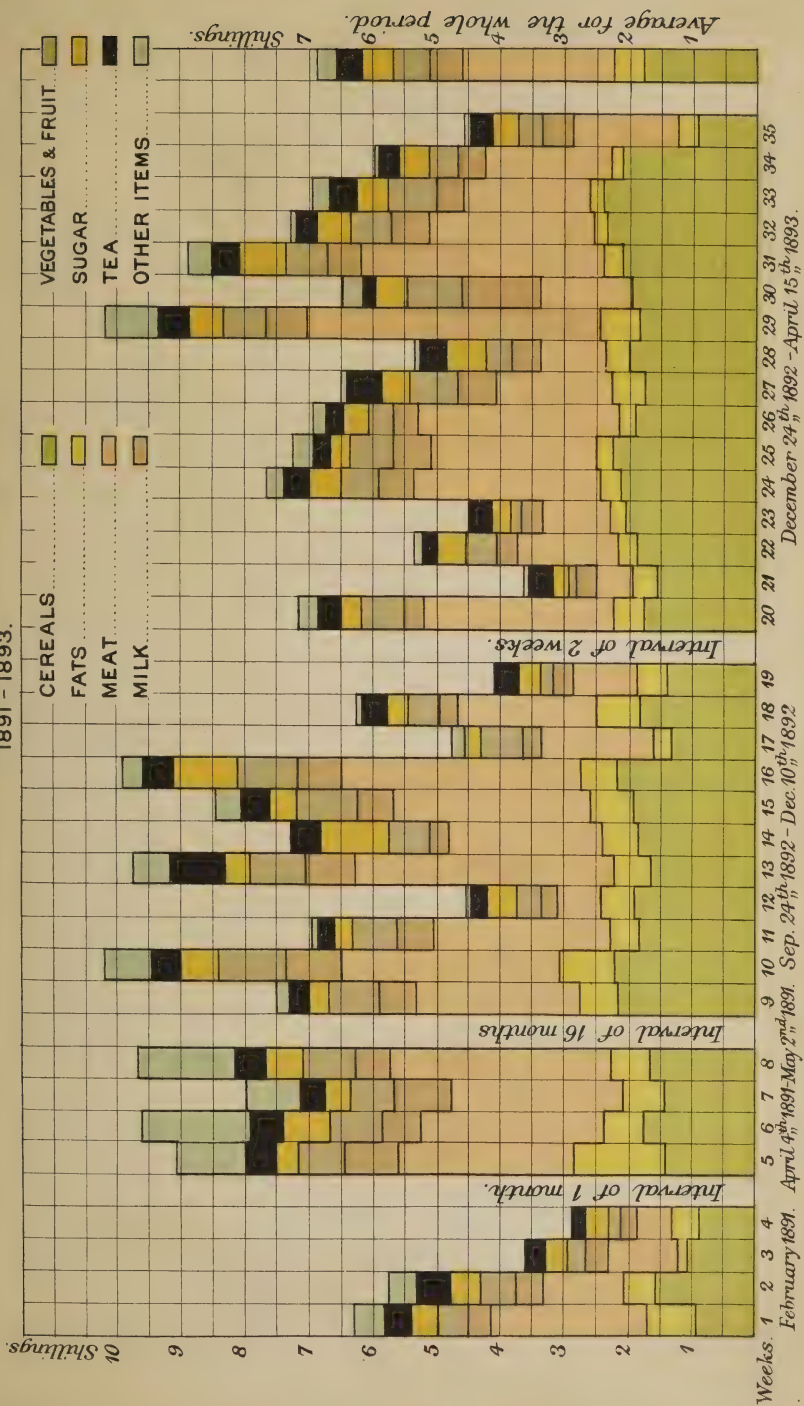
FAMILY: HUSBAND (30¹⁰/₁₂) WIFE (29¹⁰/₁₂) 2 BOYS (8.5⁹/₁₂) 1 GIRL (3⁶/₁₂)
(Ages February 1891)



FOOD CHART

PLUMBER (SOUTH LONDON) 35 WEEKS.

1891 - 1893.



change, the family took to later rising in the morning; formerly they got up at half-past five to buy stale bread at half price, which the baker cleared out before he commenced the ordinary business of the day. They now said they found this too tedious to be continued.

In the second chart, under the heading—

Cereals, <i>are included</i> bread, flour, biscuits, rice, &c.		
Fat,	„	butter, lard, suet.
Meat,	„	butcher's meat, fish, bacon.
Milk,	„	milk and eggs.
Vegetables and fruit, <i>are included</i> potatoes, other vegetables, dried and fresh fruit.		
Sugar	„	sugar, jam, treacle.
Other items	„	condiments, alcohol, coffee, cocoa, meals out, &c.

Selected Prices.

Bread, 4d. to 5d. per quartern loaf (4 lbs.)			
Butter (a substitute for), 8d. per lb.			
Sugar	..	..	2d. „
Tea ..	..	..	1s. 2d. „

DISCUSSION on MR. HIGGS'S PAPER.

THE PRESIDENT (MR. CHARLES BOOTH), after referring to the great suggestiveness of the paper, said he thought that the ideas involved in the terms *extensive* and *intensive* as applied to methods of inquiry needed some development. *Intensive* seemed to refer to a restricted area of inquiry as well as to complexity of detail, and *extensive* to simplicity in the character of the inquiry as well as to the amount of ground covered. These characteristics went together to a considerable extent, but involved different ideas. It was no doubt necessary that an inquiry extended over a large area should be simple, but it was by no means necessary that simple work of this sort should be carried out from a single centre. A large number of individual simple inquiries, if afterwards combined, would form an extensive inquiry. On the other hand, a single complex inquiry, in itself intensive, would acquire extension when combined with others, whether those others were equally complex or not. Whichever plan individual workers adopted would be useful. Above all it was not necessary for an extensive inquiry to proceed by sending out thousands of circulars, a method which was almost sure to fail. If the members of such a Society as this were individually to undertake quite simple inquiries, the

result would be most extensive, and might be very valuable, and he hoped that some definite action in this direction might be taken. He could not conceive any work which the Society was more fitted to do with its thousand Fellows spread over all parts of England, and represented in Europe and America; the area of inquiry could not but be extensive, and the more intensive the work might be in individual cases the better. Anyone inclined to adopt the elaborate system of M. Le Play would not only provide material in itself of great value, but would help to throw light, as Mr. Higgs had said, upon the results of simpler inquiries; and anyone attempting a simple inquiry should study one of M. Le Play's budgets, in order to learn what are the essential points of even the simplest inquiry. Then with regard to the time covered, it was no doubt a very desirable thing to have a budget which ran on for the whole year, but it was not necessary. A budget of a few weeks might be of great value if it was accurate, so far as it went. He therefore hoped that those who might feel inclined to take up work of this kind, would not be alarmed by the idea that it was useless unless done in an elaborate way or for an extended period of time. They would perhaps find, when once begun, that the work was so attractive that they would feel tempted to go on for the rest of the year, and if so, so much the better. Similarly with regard to including receipts as well as expenditure in the budgets. It was much more difficult to obtain particulars of income, and it was not necessary to combine the two. It was better to give both sides, but by no means necessary, for budgets which gave expenditure only had great statistical value. The work of obtaining the information put those who did it in touch with those of a different class, and would be found exceedingly pleasant, and the statistical uses which could be made of a series of budgets, arranged on a more or less uniform plan, were perfectly endless.

Professor A. MARSHALL heartily endorsed what had been said by the President as to the interesting and suggestive character of Mr. Higgs's paper. He was inclined to think that the extensive and intensive methods were really different things with somewhat different aims. The intensive study need not confine itself to such things as could be measured by numbers and represented in statistics. It might be more thorough and in a sense more human than an extensive study, in which the comparative method was to be applied by the mechanical means of mere numbers. It was thus of exceptional value to the individual who made it; and it was most important that before undertaking studies on the extensive plan and with a view to statistical tabulation, everyone should, if possible, make for himself a good number of intensive studies. But the results of studies by the intensive method were not so easily conveyed to others as were those of studies by the extensive method. It was true that Le Play's work had so much genius in it that it would be well that people should read it in order to learn from him; but, speaking generally, if he were offered a pamphlet of fifty pages describing any ordinary person's observations of a particular family, he should seldom proceed to read it through

with avidity, for such descriptions were apt to be tedious to read, and the time spent in reading them might often be better spent in direct observation. Statistical inquiries which were intended for the use of others should, he thought, generally be on the extensive and comparative methods, though based on a careful preliminary training in intensive studies. The object of intensive study was rather to get to know human nature. Intensive accounts had great value not only in the study of life as a whole, but also from the narrow economic point of view, because they can enter into minute details of expenditure which it would be impossible at present to tabulate systematically, though ultimately, when there were enough of them, they would no doubt afford a basis for statistico-economic propositions. But any two families differed so much from one another that if too much stress were laid upon an account without a personal knowledge of the family, the reader would probably be led astray. He quite agreed that the investigation into the cost of production in the coal and iron trades in the United States was in many respects the most important inquiry of the kind yet published. To a great extent it was pioneering work in new ground; but it contained many statements that it was difficult to accept without further information, and thus its value for constructive purposes was considerably lessened. Referring to the very interesting diagram which had been shown by Mr. Higgs, he observed that the expenditure on meat was a great deal more than on cereals, and he doubted whether a family with an average weekly income of 12s. 6d. would generally follow this rule in all parts of England. The budgets he had seen of people who lived in the country on such an income showed generally an expenditure on cereals twice as high as that on meat. There were great difficulties in interpreting an account, however detailed, concerning the life of a family with whom one had no personal acquaintance. Large numbers of observations were necessary so that the personal peculiarities of individual families might counterbalance one another. When they had got a little further with their statistics of consumption, they might estimate the total quantities of the chief commodities that would be bought in a district on the supposition that the budgets which they had got were representative, and then they might check their results by getting from dealers and others the total quantity of those commodities that were sold in the district. If it appeared that the quantities calculated to be bought and those calculated to be sold were about equal, a fair start would have been made, and they might feel confidence in their work. If not, they would have learnt where to look for the weak points of their work, and could make a new and better start. There was a special difficulty in accepting the accounts of the expenditure of an individual family made after it had been continuously under critical observation. Mrs. Marshall had succeeded in tapping a source which might prove useful in future and which avoided that danger, for she had obtained the accounts, kept in "Cassell's Housekeeper," of the wife of a working watchmaker, whom she had known when in service before her marriage. The entries had been made in the "Housekeeper" before she knew

that anyone but herself would see them, and were therefore specially trustworthy. Interesting as the figures in the paper were, he felt that many of them had been prepared after the persons knew that they were under observation, and this was a great source of weakness in all the budgets that had hitherto been obtained. Many people blamed economists for not writing more about consumption; but those who had worked on this subject had found that the material at their command was extremely small, unless they went into the general question of how money ought to be spent. Something like the whole imperial revenue, say 100 millions a year, might be saved if a sufficient number of able women went about the country and induced the other women to manage their households as they did themselves. Mr. Atkinson had brought out a very suggestive table comparing retailers' profits on articles of food, and he thought it might be inferred from this table that if people saved 10 per cent. on the ultimate retail prices, this would amount generally to 20 per cent. on the wholesale prices; and this was a very important means of effecting a great rise in the real value of wages, without loss to anyone. Returning to the statistics of consumption, a great deal of information could be got from the managers of co-operative stores. There was no doubt that the notion of working for the public rather than for private gain was more widely spread among co-operative bodies than elsewhere. In many towns a considerable part of the working classes spent nearly the whole of their income in the co-operative stores, and the managers knew the incomes of these men almost exactly. They could estimate pretty well how far a change in a man's consumption was due to a change in his habits, or to a variation in his income or in the prices of particular goods. Returns from such co-operative bodies would save a great number of those errors which must arise in private inquiries.

M. PAUL DE ROUSIERS said that the school of Le Play was now divided into two branches with two different objects, the first of which might be described as philanthropic, aiming at the amelioration of the people, while the second is rather scientific and aims at the amelioration of the method. The first branch is mostly devoted to the vulgarisation of the social conclusions contained in the works of Le Play; the second uses and tries to improve his method of observation to find new conclusions.

The chief improvement brought into the method by M. de Tourville is the following. M. Le Play's studies had convinced him that no social observation can be made unless it has its object in the prosperous individual family of the workman. This is the simple body which must be first analysed in social science, as simple bodies must be first analysed in the science of the chemist. But M. Le Play did not show how from the observation of the workman's individual prosperous family, he was led to the knowledge of the society at large. So, between the monographs which he published in "*Les Ouvriers Européens*," and the conclusions he drew from them in "*La Réforme Sociale en France*," the connect-

ing link was not to be seen. This is the gap which M. de Tourville has been endeavouring to fill, and the "Nomenclature of Social Facts" which he established for that purpose is used by his followers to find the features of a society as a whole, from the observation of some individual prosperous families. The method of Le Play is largely improved in that respect, as the monograph of the workman's family leads directly and in a scientific way to the knowledge of the society it belongs to.

Mr. BENJAMIN JONES said that he had been to some little extent connected with the efforts made a few years ago by Mr. John Burnett to procure some working class budgets, and he had found one great obstacle to be the dislike entertained by many provident working people to the endeavour to obtain particulars of their income and expenditure. They thought that working people should not be singled out, but that inquiries should be made all round and in all classes. He would therefore suggest that they should try to obtain family budgets, which would lead to much more satisfactory results. A great deal of information could be obtained by applying to a village or small town the method—or even a more exhaustive one—that had been applied to the East End. In this way they could obtain budgets of all classes. The Society included among its Fellows some who might truly be called labour representatives, and he thought that as the Chairman had invited the Fellows to enjoy an interesting and attractive pursuit in collecting information among the working classes, so there might be provided for these labour representatives an interesting and attractive study in collecting similar information in the homes of the wealthy. What was wanted was to map out the income and expenditure of all classes in the country. He believed in checking wasteful expenditure, in whatever class it might be found, and the only way in which anything could be done in this direction among the working classes, was by teaching them the relative values of different kinds of food, the merits of different kinds of cookery, &c. But even then the total amount which could be saved by working people would be very small compared with the total revenue or wealth of the country. It seemed to him that wonderfully successful results could be obtained in the following manner: Map out clearly—whether by the "extensive" or "intensive" method, it did not matter which—the cost of maintenance, food, and clothing, in our workhouses and prisons; then do the same among working classes, especially among the dock labourers, and government labourers, and those honest working people who were willing to work when they could get it; and compare the condition of these people with that of the paupers and prisoners. He believed these honest workers would be found to be in a far worse condition than paupers and criminals as far as comfort was concerned. They could then investigate the condition of the skilled artisans and lower middle class, whom they would find living in a state of moderate ease and comfort which they would not want to disturb, but which might well be improved. Going further up the scale they would begin to find out that the

enormous waste was among the rich, the stewards of the wealth of the country, and here he thought that the government should take steps to see that the wealthy justly administered the powers entrusted to them. He believed that by obtaining family budgets a great deal of good would be done, and the well-being of every class of the nation would be materially promoted.

Mr. JOHN BURNETT regretted that invitations had not been issued to a few working men and their wives, who could have best explained the difficulties of "making both ends meet." He did not quite agree with what Mr. Jones had said as to the absolute necessity, in the first place, of having family budgets from all classes of the community, for to begin with working class budgets was to commence with that section of the community concerning which information was most required. They wanted to know in what respects and to what amount the income of the working classes fell short, and until they had full knowledge on this point, that class would stand very little chance of seeing effectual steps taken to improve their position. Working men naturally objected to inquiries of this kind, because their experience had shown them that, although those who collected the information might not preach sermons to them, the particulars they obtained enabled others to offer the favourite advice: "Why don't you keep your expenses a little below your income and so make both ends meet and save a little money?" If the working classes could be taught that the inquiries had really underlying them an earnest desire to promote their welfare, they would gradually fall into the system, and furnish the information.

The extensive and intensive methods might be very usefully combined. Budgets should in the first place be collected by the extensive method, in order to afford as complete a picture as possible of the income and expenditure of the people, and then a certain amount of information as to a more limited number of cases should be collected on the intensive system, to show how it was that similar incomes were expended with such dissimilar results. Statisticians wanted to know exactly the effect of a man's social life upon his whole condition. The manner in which a man employed his spare time had a material influence on the expenses of his family, and unless statisticians could have a certain number of cases which had been collected in the first place on the extensive system, and afterwards submitted also to the intensive method, they could not get a sufficiently correct idea as to income and expenditure for the purpose for which it was required. The co-operative societies might supply a large amount of information on the extensive method. If the larger of these societies could be induced to issue coloured checks for goods sold in different departments, they might get sufficient data on which to base reliable averages of the expenditure of their members on particular commodities. The co-operative movement was now so vast that the managers of stores could give information of the highest value to students of this subject. Co-operative societies were now in many cases property owners, and the knowledge of the officials

extended over the whole range of a member's expenditure, from house rent down to the smallest household requirements.

Mr. JESSE ARGYLE thought that it was possible to lay too much stress on the differences between individual families. They could find thousands of men of the ordinary sober, steady, regularly employed working class whose mode of spending their wages showed no material difference. The most practical method of investigation seemed to him to be to conduct an extensive inquiry on simple lines, then to classify the results, and illustrate the character of each group so classified by applying the intensive method in a certain small number of cases. Many people appeared to think that the working classes generally spent their money at hazard, but that was not at all the case; the wife knew very well on what she would have to spend the money that came to her week by week before she received it. Mothers brought up their daughters as they had themselves been taught, and if they could trace a good steady family back for five or six generations, they would probably find the same method of expenditure running right through. If the differences were too much enlarged upon, no results would be reached, for it was impossible to take the intensive system over a very large area.

One of the most noticeable points brought out by the tables in the "Report of the United States Commissioner of Labour, 1890," was that in the trades in question the Scotch appeared to earn more and have a larger surplus than the English, Welsh, or Irish. With regard to the price of meat, this was affected not only by the place, but also by the time of purchase; those who bought it late on Saturday night, though they did not get so good a quality, obtained it much cheaper. As to the argument that because a working man was able to get along somehow in winter when work was slack, he must therefore be well off in summer when things were busy, he pointed out that in many trades the men lived during the winter on their earnings during the summer. Not that they lived upon direct savings, but their earnings were forestalled by pawning much of their furniture during the winter and redeeming it when summer brought them more regular employment. A very inadequate amount seemed to him to be set down for clothes, particularly in Mr. Aves's budget, where the amount was only 1s. 6d. per week for a family of eight persons; this defect was generally noticeable in family budgets. From the American returns it seemed that the Englishman, wherever he went, paid more for rent than the people of other nationalities, thus fitly illustrating the proverb that "the Englishman's house is his castle." Another old English saying, that two people can live as cheaply as one, was very aptly illustrated in these tables. The expenditure of a family of two, without any children, averaged about 87 dollars per 100 units; this fell to 50 dollars in cases where there was a family of five children. This showed the value of co-operation. One good reason for the adoption of Mr. Jones's suggestion in extending the inquiry, was that these investigations aroused a certain amount of suspicion amongst working people,

who might be disarmed if they got to know that the inquiry applied equally to other classes, in which case they would be found more ready to give information.

MR. J. GRAHAM BROOKS said that when in Berlin he had tried to test the accuracy of Dr. Engel's budgets. He had investigated the expenditure of 38 families in a large tenement, and had found so much variation that he had been obliged to give up the attempt. On the other hand, in the Harz mountains he had found that there was a singular likeness in the budgets of some 80 families, so that it seemed to depend on the group of persons whether the variations were so great as to be embarrassing or not. There was one sign of success in America in the kind of work which Mr. Atkinson had done, and that was that his ovens had been recently adopted in several institutions and cookery schools in New York and Boston. The walls of these schools were hung with scientific charts showing the nutritive power of different kinds of food. The thing called science produced a very strong impression on the imagination of the American working man. Where the daughters could be induced to learn something about cooking in these schools the effect reacted on the families. The girls did not mind cleaning the stoves and kettles when they saw cultivated ladies setting them the example, and they became very eager to learn how they could be nourished more cheaply. A sort of reaction against the extravagance which characterised the American workman was now beginning to set in. Where these little centres of science were established in the States they exercised a real influence in the right direction. Mr. Brooks then mentioned the case of an Irishman who had been induced to give up frequenting the public-house by his daughter being able, thanks to what she had learnt in one of these cookery schools, to give him better meals.

MR. ERNEST AVES thought that the remarks made to the effect that details of income were of minor importance, required qualification. If this part of the subject were ignored altogether, some serious gaps would be left in our knowledge. In the first place, the variations in income week by week might not be reflected in the details of expenditure, and in the second place, we should have insufficient information as to the supplementary earnings of the family, such as those of the wife or children. With reference to Mr. Argyle's allusion to the cost of boots and clothes in the budget he had contributed, it must be remembered that the workman in question was a slipper maker, who would, in all probability, himself make and mend the boots of the family. Mr. Higgs spoke of the man whose expenses were exhibited in the charts as a plumber, but he was in no sense a typical representative of this, the best paid section of the building trades, and should perhaps rather be described as a "handy man," in very casual employment.

MR. GEORGE HAVEN PUTNAM said that Mr. Higgs's interesting analysis of the budget of an average British workman, made no reference to any allowance in such budget for *amusement* expendi-

ture. The budget of an American workman of the same class, would assuredly include a regular weekly outlay for amusements, or what the men sometimes specify as "frills." One of the difficulties of the American workman in making a wise utilisation of his resources was, as Mr. Putnam had found in his experience, the fact that the pay came at the end of the week, on the afternoon of Saturday, so that on the day which during the greater portion of the year was a part holiday, the workman had in his pocket the amount of his week's wages. He was naturally disposed to use this money more freely in the excursions of Saturday afternoon or of the Sunday, than would have been the case if the money had represented what remained over at the end of the week, after making payment for the necessary weekly outlays. It not infrequently happened therefore that on account of some wasteful or unduly liberal expenditure on the Saturday or Sunday, the budget was unduly straitened by the time that the following Thursday or Friday came round. To avoid this evil, Mr. Putnam said that the experiment had been tried in his own book manufactory, a concern in which about 200 hands were employed, of paying the wages on Monday instead of on Saturday. This plan met with no objection from the more thrifty working men, and was very much preferred by nearly all the wives, as the weekly excursion or amusement expenditure could then be provided for out of the savings secured by the end of the week. The majority of the employes were however not satisfied with the arrangement, and after some months' experiment and threats of strikes or other difficulties, it was found necessary to resume the Saturday pay-day. The difference between providing for luxuries out of the money saved or out of the full earnings, is of course a difference not of detail, but of principle, and one which may have very important results on the welfare of working men on either side of the Atlantic. The point seemed therefore to Mr. Putnam to be worth submitting for the consideration of the Society.

Mr. HIGGS, in reply, said that the chart was rather a homage to what he understood to be the custom of the Society, but must be regarded as an imperfect portion of an imperfect study. It was not intended to be typical of every plumber in London, or even of the half-skilled. For the rest, he agreed with almost everything that had been said: he was in favour both of the extensive and of the intensive methods of inquiry; of having the income and expenditure shown wherever possible, and of recording expenditure only when income is not known; of having returns from those who were and from those who were not co-operators; from societies and from individuals, and indeed from all classes. Perhaps he ought specially to thank Professor Marshall for his very interesting suggestion. With regard to Mr. Jones's desire that they should begin to collect budgets from the well-to-do, the budget of a duke (if it could be obtained) would form a large volume, and the advantage of reading through it would not be at all proportionate to that derived from a study of workmen's budgets. He agreed with Mr. Burnett that by beginning with

the latter they had begun with what was simplest, most urgent, and of most general interest and importance. Some of the imperfections in the American report might have been avoided if those who had been employed upon them had been previously educated by the study of some intensive budgets. He had himself noticed many untenable conclusions in them. That the Scotchmen consumed more food was due, he thought, to unequal distribution of nationalities throughout the six industries: most of them happened to be employed in the steel industry, which was the best paid and best nourished of the six, so that Scotchmen in that industry not only came out well themselves, but they also brought up the average for Scotchmen generally. It would however be ungracious to criticise too severely this pioneer effort, and he had therefore contented himself with the suggestion, which had been confirmed that evening, that the two methods were really the handmaidens of one common purpose, and that they would do wisely to avail themselves of both in every possible direction.

MISCELLANEA.

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I.—The Agricultural Produce of the World.

THE United States Department of Agriculture has just issued a special Report dealing with the production and distribution of the principal agricultural products of the world. It must be noted that agricultural produce, in the American sense of the term, does not include either animals or the produce raised for consumption by animals. The quantities are stated to be taken, wherever possible, from the official publications of the different countries concerned, and the data are reduced to American units. The figures given—which will be found summarised in Table A at the end of this article—are averages, in the great majority of cases, of the results of ten or eleven years from 1880 to 1890: the exceptions will be found noted in the explanatory notes dealing with each country. In this table figures in ordinary type are official figures, the others are estimates from various sources, such as the Commercial Estimates of Wheat Production, Juraschek's *Uebersichten der Weltwirthschaft*, &c. It is of course obvious that the produce of many countries must remain unknown and cannot be estimated; consequently such a table as is here given can be at best but a comparison of the aggregate produce of the leading countries of the world for some of the more important products. For some crops, indeed (for instance, in the case of tobacco), no estimate can be given for many of the more important countries. For the same reason, no attempt has been made to total the figures in the table; estimates, wherever possible, of any crop will, however, be found in the section dealing with that crop.

The same report contains also figures showing the imports and exports of each kind of product for each country in the world; and combining these with the produce, when known, an attempt has been made to deduce the net supply required by each country.

Space prevents us, however, from dealing here with more than the statistics of production, which present more novelty, and the details concerning the distribution must be sought for in the report itself.

In the following remarks (taken entirely from the report referred to) it must be borne in mind that the *bushels* are throughout *Winchester bushels*,¹ the standard used in America.

Wheat.—The total of all the *officially* estimated *European* crops amounts on an average, during the ten years 1881-91, to 1,088,000,000 bushels. If to this total we add the commercial estimates for recent years for Bulgaria, Greece, Portugal, Norway, Servia, Spain, Switzerland, and Turkey, we have an average European crop of 1,265,000,000 bushels. Except in the case of Bulgaria, the commercial estimates are the average of the four years 1888-91. For the whole world, we have the following estimate:—

	Bushels.
Officially estimated	1,873,013,000
Commercial estimates, 1888-91	293,551,000
Bulgaria and Caucasus, 1891	114,292,000
	<hr/>
	2,280,856,000
	<hr/>

This estimate does not include the wheat grown in the Northern Provinces of China and some minor districts. The largest quantity is produced in the United States, after which follow, in order, France, British India, Russia (with Poland), Italy, Hungary, Germany, the United Kingdom, &c. With the exception of the United Kingdom and Belgium, Europe is practically self-supporting, the excess in the eastern half being sufficient to balance the deficiency in the west.

Maize.—80 per cent. of the total crop is produced in the United States; the remainder is almost entirely grown in the countries on the Lower Danube and in Southern Europe, Mexico, and the Argentine Republic. In Europe, however, it is nearly all used as an animal food. The principal exporting countries, after the United States, are Roumania, Russia and the Argentine Republic. The aggregate official estimates of crops are as follows:—

	Bushels.
Europe:	311,821,000
Asia.....	824,000
Africa	2,905,000
United States.....	1,680,696,000
Australasia	6,798,000
Islands	30,000
	<hr/>
Total (official)	2,003,074,000
	<hr/>

If to this figure we add Dr. Juraschek's estimates—as given in Table A, and a doubtful 200,000,000 bushels for Mexico, we have

¹ 1 *Winchester* bushel for grain = .969447 *Imperial* bushel; or 98 *Winchester* bushels may practically be considered as equivalent to 95 *Imperial* bushels.

an approximate total of about 2,300,000,000 bushels as the production of the world.

Rye.—96 per cent. of this crop is grown in Europe, mostly in the east, where it is by far the most important bread stuff, Russia (with Poland) alone producing 54 per cent. of the world's crop. Germany and Austria also grow large quantities. The only important rye-growing countries outside of Europe are the United States and Japan. The official estimates of the European production amount to 1,210,662,000 bushels; to this must be added some 57,317,000 bushels, which Dr. Juraschek calculates as the produce of other European countries which give no official figures. We thus have a total, for Europe, of nearly 1,268,000,000 bushels. For the world generally the total amounts to some 1,318,000,000 bushels. Here again, as in all cases, such countries as China, and others for which no data at all are available, are entirely left out of count; the totals given can only be considered as an approximation to the production or consumption of the civilised world.

Barley is a much smaller crop than the foregoing. It is chiefly produced in Russia, Germany, Austria-Hungary, United Kingdom, United States, France, and Spain, &c., in the order named. Besides the countries mentioned in the table, Algeria, according to Dr. Juraschek,² also produces nearly 35,000,000 bushels annually. The official estimates for Europe amount to 565,381,000 bushels, and the whole European crop may amount to 640,000,000 bushels; while the supply of the civilised world may be taken to be a little over 800,000,000 bushels.

Oats.—Russia and the United States together yield just about half the supply of the civilised world; the crop is also largely grown in Germany, France, United Kingdom, Austria-Hungary, Canada and Sweden. New Zealand yields a heavier crop of oats than of other cereals. The whole commercial supply of this grain may be thus estimated:—

	Bushels.
Europe, official estimates	1,592,114,000
„ unofficial „	34,050,000
United States.....	594,961,000
Australasia	17,045,000
Canada (estimated)	90,000,000
	<hr/>
	2,328,170,000

Potatoes.—The estimates of this crop are not so complete as those for the cereals already dealt with. Neither does it form so important an item in trade, as in most countries the production is about equivalent to the consumption; the greatest importer being the United Kingdom, and the greatest net exporter Germany, the total in either case amounting only to about 5,000,000 bushels. Official estimates for Europe amount to 2,663,506,000 bushels, of

² There are, however, official returns of the produce of crops in Algeria, with which Dr. Juraschek's estimate agrees fairly well.

which Germany produces nearly 900,000,000 bushels, and in years of plenty over 1,000,000,000 bushels. Outside Europe the official estimates total 187,671,000 bushels, towards which the United States contribute 169,809,000, or 90 per cent.

Tobacco.—In Europe this crop is grown to an important extent only in Hungary, Russia, Germany, and France. The official estimates for European crops amount to about 300,000,000 lbs.; adding Dr. Juraschek's estimates for other countries, we have a total of about 442,000,000 lbs. for Europe. This is exceeded by the amount grown in the United States. It is impossible to give any estimate for the production of the world, as so much comes from countries for which no data exist, such as British India, the Spanish possessions (Cuba, Philippine Islands, &c.), Mexico, Paraguay, &c. Besides the countries included in the table, however, the following may be mentioned:—

	lbs.
Ceylon	5,712,000
Java	18,359,000
Sumatra	24,007,000
Cochin China	4,987,000

Paraguay exports some 7,000,000 lbs. and India some 11,000,000 lbs. annually.

Butter and Cheese.—The only countries which attempt to supply an estimate of the production of butter and cheese are the following:—

	Butter.	Cheese.
	lbs.	lbs.
Austria (without Hungary) (1881-84) ..	138,057,000	141,150,000
France (1882)	165,017,000	252,859,000
Italy (1890)	64,953,000	262,286,000
New Zealand (1891).....	18,280,000	6,976,000

It is stated that the milk used in the manufacture of dairy products in France constituted a little more than 36·7 per cent. of the total quantity in the year 1882.

Large quantities of butter (real or imitation) are exported from Netherlands, France, Denmark, Sweden, United States, and Canada, while the largest quantities of cheese are exported from the United States, Canada, Netherlands, and Switzerland. It is in many cases impossible to separate the figures for butter and artificial butter, which are generally grouped together.

Cotton.—The United States and Japan are the only two countries, growing any quantity, for which official estimates of the production exist. The average production in Japan (1880-87) is 137,641,000 lbs., and in the United States (1881-90) 3,261,589,000 lbs. It is all grown between the limits of 35° north and south of the equator, and by far the largest quantity between 20° and 35° north latitude. The following estimate is by Mr. Thomas Ellison, of Liverpool, for 1884.—

	Bales of 400 lbs.
United States	7,035,000
South America, West Indies, &c.	300,000
East Indies	2,450,000
China	1,425,000
Japan	132,000
Turkey and Persia	120,000
Asiatic Russia	100,000
Egypt	625,000
Africa (Egypt excepted)	375,000
Italy and Greece	10,000
Australia, Fiji, &c.	2,000
Total.....	12,574,000

These estimates are necessarily based on the known facts of exportation, population, and assumed consumption *per capita*. The following estimates of production in the four countries which are alone of importance have also been prepared :—

	1890.	1889.	1888.
	Bales of 400 lbs.	Bales of 400 lbs.	Bales of 400 lbs.
Brazil	364,707	329,166	453,348
Egypt	946,856	740,047	633,098
India	3,005,253	3,314,593	2,907,046
United States.....	10,790,110	9,057,069	8,593,521
	15,106,926	13,440,875	12,587,013

Wool.—But few countries give an official estimate of their wool production. An estimate for the production of the whole world amounts (according to the Wool-book of the National Association of Wool Manufacturers) to some 2,500,000,000 lbs. Besides the countries included in Table A, the following, according to the same authority, also produce large quantities: Uruguay (exports, 1884, 42,000,000 lbs.), Mesopotamia (31,555,000 lbs.), Sivas (Asiatic Turkey) (8,300,000 lbs.), Peru (6,700,000 lbs.). A considerable amount is also produced in other Mahometan Asiatic countries—Thibet, &c.

The only official estimates are as follows :—

	lbs.		lbs.
Austria (1881-84)	11,137,000	United States (1881-90) ..	280,700,000
France (1880-89)	104,172,000	South Australia (1881-90)	43,602,000
Italy (1890)	26,394,000	Tasmania (1884-89)	7,746,000

NOTES TO TABLE A.

Austria-Hungary.—The official statistics are taken from the *Statistisches Jahrbuch* of the Ministry of Agriculture, in the case of Austria, and from the *Statistisches Jahrbuch für Ungarn*, in the case of Hungary. The production of wheat has varied little in Austria, but in Hungary both acreage and production have increased, and since 1886 the empire has become an exporting

country. In Hungary the production of tobacco is steadily decreasing.

Belgium.—Official figures are taken from the *Annuaire Statistique de la Belgique*. The acreage is returned but once in ten years, and each year an estimate of the yield per acre is made of the various crops; the total produce is then calculated from these two data. The figures in the table are based on the area in 1880.

Denmark.—The statistics of production are from *Sammendrag af Statistiske Oplysninger* and *Statistiske Meddelelser*.

France.—Official returns are from the *Récoltes de la France en 1880*, *Statistique Agricole Annuelle*, and the *Bulletins du Ministère de l'Agriculture*. The production of wheat is fairly constant; that of maize is steadily declining. The production of wool is taken from the *Annuaire Statistique de la France*, and the figures show an increase of nearly 50 per cent. from 1880 to 1889.

Germany.—Returns taken from the *Statistisches Jahrbuch für das Deutsche Reich*. There has been a steady but slight increase in the acreage and production of grain. This country is by far the largest potato-growing country in the world, and the greater part of the produce is consumed at home. Tobacco cultivation is apparently declining.

Italy.—The figures are from the *Annuario Statistico Italiano*. The years, on the returns for which the averages are based, are as follows: Wheat, maize, rye, and oats, 1884-91; barley, 1884-92; potatoes, 1884-90; and tobacco, 1881-90.

Norway.—The only official data for this country are for the year 1875, and are taken from the *Statistisk Aarbog for Kongeriget Norge*, 1891.

Sweden.—The official figures are from the *Jordbruk och Boskapsskötsel*.

Netherlands.—Returns taken from the *Jaarcijfers over 1890 en vorige Jaren*, No. 10. They deal with the years 1880-87.

Portugal.—The data in the table are the average of the three years 1882-84, taken from the *Annuario* for 1885. A later estimate made by M. Louis Grandeau is as follows:—

	Bushels.		Bushels.
Wheat	8,512,000	Oats	426,000
Maize	20,226,000	Rice	596,000
Rye	6,640,000	Potatoes.....	8,212,000
Barley	1,986,000		

Roumania.—The produce, as to which data for the two years 1890-91 only are available, are from the *Buletin Statistic General al Romaniei*, 1892.

Russia and Poland.—The figures on which the averages are based, and which begin in 1883, are from the *Annuaire Statistique de la Russie* for 1890, and the *Résultats généraux de la Récolte en Russie*, 1891. In the case of Poland the returns, contained in the last mentioned volume, date from 1888 only. No official statement is available for Finland or the Caucasus, and these two provinces are accordingly excluded from returns dealing with Russia.

Nearly half the wheat crop, and very large quantities of other cereals are exported, the imports being quite insignificant.

United Kingdom.—The agricultural produce statistics date only from 1884, and cover the period 1884-91. They are from the *Agricultural Produce Statistics of Great Britain*, and are exclusive of the Isle of Man and the Channel Islands. The acreage of wheat is steadily declining.

British India.—Official estimates for the years 1885-91 are available only for the production of wheat; they are from the final memoranda on the Wheat Crop of India, issued by the Revenue and Agricultural Department of the Government of India. The figures include native states as well as British provinces.

Japan.—The authority used is the *Résumé Statistique de l'Empire du Japon*, 1891. For maize, potatoes, tobacco, and cotton, the average is for the years 1880-87.

Natal.—The data are from the *Statistical Abstract for the Colonial and other Possessions*.

Canada.—The *Statistical Year Book of Canada* for 1891, is the authority from which the estimates of the production of wheat are taken. For the remaining agricultural produce there are official figures for the provinces of Ontario and Manitoba only. The averages are as follows:—

	Ontario.	Manitoba.
	Bshls.	Bshls.
Wheat	27,838,000*	10,227,000§
Maize	6,607,000†	—
Rye	1,736,000‡	—
Barley	19,959,000‡	1,690,000||
Oats	60,252,000‡	7,334,000||
Potatoes	19,435,000‡	2,304,000||

* Average of 1881-91. † 1882, 1884-91. ‡ 1882-91.
§ 1883-91. || 1883-87 and 1889-91.

Maize and oats show a steady increase in Ontario; barley does the same in Manitoba. The average of wheat production in the latter province is greatly raised by the harvest of 1887 (12,750,000 bushels) and by the large increase in acreage, combined with good harvests, in 1890 and 1891, when the production was 15 and 24 million bushels respectively. In no other year did the production reach 8 million bushels. A similar remark applies to oats in this province: the amount in 1891 being over 15 million bushels.

For the other provinces the production has been estimated in the census returns of 1881, as follows:—

	Wheat.	Oats.	Potatoes.
	Bshls.	Bshls.	Bshls.
British Columbia	179,000	261,000	489,000
New Brunswick	538,000	3,401,000	7,180,000
Nova Scotia	546,000	1,932,000	7,611,000
Prince Edward Island	564,000	3,650,000	6,233,000
Quebec	2,083,000	20,620,000	15,342,000

United States.—The averages are deduced from the returns in the official work of the United States Department of Agriculture. This country grows the largest quantity of wheat, maize, oats, cotton, and tobacco of any country in the world. Agricultural products form some 73 per cent. of the total exports from this Republic. The production of maize, barley, oats, potatoes, tobacco, and cotton, shows a steady increase, while the other products are, on the whole, fairly stationary. The averages in all cases are based on returns dating from 1881, but in the case of rye, barley, potatoes, and tobacco, such returns have been discontinued since 1888, and the period considered is consequently only an eight-year period.

New South Wales.—Figures taken from the annual *Statistical Register*. The production of wheat has nearly doubled between 1880 and 1890, while that of maize is also increasing. The production of tobacco increased largely till 1889; but the acreage in 1890 was little more than two-thirds of the acreage, and the produce exactly half the produce, of 1889.

New Zealand.—The data are contained in the annual *Statistics of New Zealand*, and the period covered is from 1883 to 1891 inclusive, except in the case of maize and rye, for which the first return was made in 1888. Wheat seems on the whole to be declining, but potatoes are steadily increasing.

Queensland.—The returns used are from the *Statistics of the Colony of Queensland*. The production of wheat fluctuates very much, as does that of barley. Maize, oats (a very small crop), and tobacco are on the increase.

South Australia.—The *Statistical Register of South Australia* is the official source of the returns for this colony. The acreage under wheat has remained pretty constant, but the produce varies. Oats are increasing. There are returns only for the years 1881-85 and 1890-91.

Tasmania.—The averages are based on the returns in the annual *Statistics of Tasmania*. Potatoes are increasing.

Victoria.—The *Victorian Year Book* supplies the necessary figures. The cultivation of maize is being rapidly developed, the quantity raised in 1891 being more than eleven times the amount in 1881. Oats and potatoes also show a satisfactory increase. There is a sudden drop in the production of tobacco in 1890 to 462,000 lbs. and in 1891 to 36,500 lbs.

Western Australia.—The figures are taken from the *Western Australian Year Book*. So far as concerns those cereals for which returns are made, there is a steady increase in the production of each kind.

Produce of Wheat, Maize, Rye, Barley, Oats, Potatoes, Tobacco, and Wool, in the most important Countries of the World.

[000's omitted.]

	Wheat. ^a	Maize. ^b	Rye. ^b	Barley. ^b	Oats. ^b	Potatoes.	Tobacco. ^b	Wool. ^c
	Winchr. bshls.	W. bshls.	W. bshls.	W. bshls.	W. bshls.	W. bshls.	lbs.	lbs.
Austria	44,695,	17,316,	78,625,	51,505,	99,327,	306,985,	7,507,	11,155,
Hungary	115,834,	92,192,	43,331,	46,401,	54,790,	102,384,	126,429,	43,146,
Belgium	17,930,	—	17,121,	3,623,	26,607,	99,487,	6,613,	4,409,
Denmark	4,838,	—	16,815,	22,599,	31,496,	13,405,	—	—
France	309,433,	26,563,	69,281,	50,543,	246,061,	396,746,	43,742,	124,803,
Germany	92,862,	—	228,068,	100,948,	299,556,	891,732,	90,883,	54,894,
Greece	6,969,	—	—	2,270,	—	—	16,931,	—
Italy	122,233,	80,722,	4,429,	8,859,	17,290,	26,791,	9,985,	21,385,
Norway	355,	—	1,048,	4,422,	9,179,	20,214,	—	—
Sweden	3,673,	—	19,727,	14,141,	53,497,	48,640,	1,501,	3,307,
Netherlands	5,748,	—	10,786,	4,928,	12,452,	62,947,	6,275,	—
Portugal	7,778,	14,459,	4,843,	2,118,	993,	—	—	10,362,
Roumania	49,640,	61,003,	4,304,	19,342,	7,470,	1,640,	6,785,	—
Russia	229,916,	19,565,	668,589,	143,357,	535,092,	300,315,	112,487,	291,500,
Poland	12,351,	—	43,695,	10,548,	30,701,	164,126,	—	—
Finland	—	—	10,782,	—	9,931,	—	441,	—
Servia	8,065,	10,782,	1,702,	3,121,	2,270,	—	3,307,	—
Spain	73,245,	22,132,	20,997,	49,372,	7,377,	—	—	66,138,
Switzerland	2,622,	—	1,986,	851,	5,107,	—	4,409,	—
Turkey	38,108,	} 21,281,	20,146,	21,849,	9,364,	— {	5,115,	—
Bulgaria	40,000,							
United Kingdom..	77,677,	—	1,702,	80,155,	167,307,	228,093,	—	147,475,
British India	254,927,	—	—	—	—	—	—	72,000, ^d
Japan	13,858,	576,	22,411,	32,027,	—	1,590,	41,324,	—
Asia Minor	37,339,	—	—	—	—	—	—	—
Persia	22,131,	—	—	—	—	—	—	—
Syria	12,969,	—	—	—	—	—	—	—
Egypt	10,381,	13,336,	—	9,647,	—	—	—	2,800,
Cape Colony	3,865,	—	—	—	—	—	—	—
Natal	10,	2,779,	—	—	—	163,	251,	} 121,682, ^e
Canada	39,899,	6,405,	2,000, ^f	21,849,	90,000, ^f	—	—	
United States	439,767,	1,680,697,	25,340,	54,992,	594,961,	169,809,	499,056,	307,100,
Argentine Re- public	} 28,708,	19,011,	—	—	—	—	—	376,700, ^e
Chile								
New South Wales	15,175,	851,	—	2,837,	—	—	—	—
New Zealand	4,240,	4,561,	16,	118,	419,	1,647,	2,559,	} 550,000,
Queensland	8,008,	242,	43,	989,	11,209,	4,976,	—	
South Australia	106,	1,741,	—	14,	5,	439,	124,	
Tasmania	11,391,	—	—	184,	79,	784,	—	
Victoria	759,	—	—	108,	761,	1,975,	—	
Western Australia	11,446,	251,	15,	1,182,	4,544,	6,103,	1,019,	
Western Australia	345,	2,	—	81,	28,	45,	—	

All quantities in this table are averages of official estimates, except those in italics, which are estimated from the following sources:—

^a The estimates are averages of commercial estimates for the four years 1888-91, except in the case of Bulgaria, for which country the commercial estimate for 1891 is given.

^b Estimates from *Juraschek's Uebersichten der Weltwirtschaft*.

^c Estimates for the single year 1891 of the *National Association of Wool Manufacturers*.

^d Exports, 1885-86.

^e Exports, 1885.

^f These estimates are given in the *Report* without other authority.

II.—*Local Taxation.*

AN inquiry has recently been issued by the Right Hon. H. H. Fowler, M.P., into the local taxation in England and Wales, with especial reference to the proportions borne by urban and rural ratepayers, and different classes of real property in England and Wales. It is now more than twenty years since the results of a similar inquiry were published, and the following summary extracted from Mr. Fowler's report³ will serve to show generally the increase of local taxation, first during the fifty years preceding 1868, and secondly during the last twenty-three years. Full details of the various changes that have taken place since 1868 will be found in the Report itself.

In 1871 Mr. Goschen (who then presided over the Poor Law Board) made an inquiry into the progressive increase of local taxation, with especial reference to the proportion of local and imperial burdens borne by the different classes of real property. He also inquired into the system adopted in foreign countries for raising the funds necessary for local purposes, and endeavoured to ascertain, as accurately as possible, whether the proportion of taxation borne by real property in this country was in excess or not of the share borne by the same class of property elsewhere.

In his report of the results of that inquiry, Mr. Goschen, in the first instance, analysed the receipts and expenditure of the local authorities of England and Wales for 1868, the latest year for which statistics were then available, distinguishing, as far as practicable, the transactions of urban and rural authorities. He next dealt with local rates for the purpose of showing—

1. *Historically*—

(a.) What had been the increase during the preceding fifty years in the gross amount of money levied by rates at different periods?

(b.) What rates exhibited the greatest comparative increase?

(c.) Whether the increase in the value of the property bearing the burden of rates had been greater or less, in proportion, than the increase on the sums collected? And

(d.) How the increase in value and the increase in the burdens borne had been distributed between lands, houses, and other classes of real property, respectively?

2. *Geographically*, in what parts of the country the increase in rates, if any, had been most marked.

³ "Report of the Right Hon. Henry Hartley Fowler, M.P., President of the Local Government Board, to the Right Honourable the Lords Commissioners of Her Majesty's Treasury, on Local Taxation, with especial reference to the proportion of Local Burdens borne by Urban and Rural Ratepayers, and different Classes of Real Property in England and Wales."—*Parliamentary Paper*, No. 168. 1893. Price 1s. 7d.

The conclusions at which Mr. Goschen arrived are summarised at the end of his report as follows:—

“1. The increase in local taxation in England and Wales has been very great—less than in other countries, but, nevertheless, so considerable as to justify the especial attention which it has aroused.

“2. Speaking broadly, the increase⁴ in direct local taxes has been from 8,000,000*l.* to 16,000,000*l.*

“3. The greater portion of this increase—at least 6,500,000*l.*—has fallen upon urban, not upon rural districts.

“4. Of the total increase, 2,000,000*l.* are due to the poor rate, 5,000,000*l.* to town improvement rates, and 1,000,000*l.* to police and miscellaneous purposes.

“5. The increase in rateable value has during the same period been extraordinarily great, and has followed, to a certain extent, the course of the increase of local taxation, being greater in the urban and manufacturing than in the agricultural districts. Nevertheless, the increase of rates has approached more nearly to the increase in the rateable value in the four counties, Middlesex, Surrey, Lancashire, and West Riding, taken together, than in the remaining counties of England.

“6. The statistics of separate counties, the division of the country between urban and rural unions, the analysis of various kinds of rates, the comparison of the imposts on houses in England with corresponding burdens in other countries, the mode of valuation in England as compared with that followed elsewhere, all point to the conclusion that house property in England is very heavily taxed.

“7. An historical retrospect seems to prove that, as regards the burdens on lands, they are not heavier than they have been at various periods of this century, nor as heavy as they are in most foreign countries, the increase in the special rates falling on lands, such as county and highway rates, having been insignificant as compared with the increase in urban rates. As regards the poor rate, the burden on lands in the country generally, whatever may be the case in special districts, has increased very slightly in amount, and not at all as regards the rate in the £.

“8. The poor rate, as regards towns, has undoubtedly increased, and caused new burdens in many places. In those rural districts where the poor rate is now high, it has, with few exceptions, always been high, and constitutes an hereditary burden which has at all times been heavy, but which has gradually been lightened by the transfer of a portion of it to other kinds of property.

“9. The consideration of the increase in the burden of local taxation must be viewed in connection with results obtained by the expenditure incurred. Of the average increase of 8,000,000*l.*, that portion which is due to the poor rate, *i.e.*, 2,000,000*l.*, may be regarded as a lamentable increase of burden, except so far as it represents, not an increase in pauperism, but the more humane

⁴ *I.e.*, during the preceding fifty years.

and, at the same time, more costly treatment of the helpless, the sick, and the insane. For the increase in the item of county police, amounting to upwards of 500,000*l.*, it may be said that a distinct equivalent in value is secured. As regards the increase in miscellaneous purposes, amounting to about 500,000*l.* spent on registration, vaccination, burial boards, and on some of the objects to which the county rate is applied, the same principle would apply. A small portion only of this sum is analogous to the poor rate, which is a burden imposed on taxpayers, from which they may be said themselves to derive no benefit.

“There remain the 5,000,000*l.* of urban rates. This sum represents the municipal expenditure of our towns, the lighting and paving of the streets, sanitary improvements of every kind, and public works of various descriptions, from vast enterprises, like the Thames embankment, the main drainage of the metropolis, and the many important works undertaken at a large outlay by Liverpool, Manchester, and the other large growing towns of the north of England, to the smaller but innumerable operations which have been instituted by the seven hundred local boards established during the last ten years. A great portion of the outlay on these purposes must be regarded as remunerative in many senses, and as being not so much a burden as an investment.”

The interval which has elapsed since 1868 has been an eventful one in the history of the local taxation of this country. It has been marked by a far larger increase in the amount of local rates falling directly on real property than was found to have taken place in the preceding half century. This increase has been mainly due to a continuous growth in the expenditure for municipal, sanitary, and other purposes incurred by urban authorities. It is also attributable to the imposition by Parliament of new charges on real property, of which the most important are those created by the Elementary Education Acts, in connection with the provision of public elementary education by school boards. In addition to these causes, the reduction in the ‘indirect local taxation,’ brought about by the abolition of turnpike tolls and the London coal and wine duties, has thrown additional charges on the direct local taxation so far as the deficiency thus created has not been supplied by Treasury grants, and the transfer of imperial revenue from the State to the local authorities. These subventions in 1868 formed a comparatively insignificant item in the receipts of local authorities. Since then they have largely increased, and the relief thus given to the rates has been supplemented by the transfer to the State of certain duties formerly devolving on the local authorities.

Adopting the classification which now prevails, the following summary will give the sums received and expended by the various classes of local authorities in 1868 and 1891 :—

Local Authorities.	1868.		1890-91.			
	Receipts, including Loans.	Expenditure, including that out of Loans.	Receipts other than from Loans.	Receipts, including Loans.	Expenditure not defrayed out of Loans.	Expenditure, including that out of Loans.
URBAN.	£	£	£	£	£	£
(a.) Metropolitan.						
Poor Law Authorities	2,047,089	2,006,221	2,129,343	2,303,393	2,662,330	2,820,557
Burial Boards	35,270	34,915	54,794	83,294	48,283	69,626
Commissioners of Baths and Washhouses*	—	—	77,027	146,427	74,139	113,076
Conservators of Commons	—	—	3,199	3,199	3,238	3,238
Commissioners of Free Pub- lic Libraries	—	—	39,208	59,208	40,735	70,910
Markets and Fairs Commis- sioners	6,276	5,507	11,564	11,564	5,020	5,020
Metropolitan Vestries and District Boards, &c.	1,423,557	1,469,223	2,063,106	2,227,406	2,102,875	2,289,507
London County Council	—†	—†	2,559,842	2,610,270	1,401,727	2,009,406
Metropolitan Board of Works	2,109,330	1,935,495	—	—	—	—
Commissioners of Police of the Metropolis‡	692,040	701,118	1,407,774	1,525,266	1,336,828	1,388,618
Corporation of London	—	—	803,330	806,330	749,467	871,744
Commissioners of Sewers of the City of London	1,824,656	1,771,096	355,441	355,441	335,231	335,231
Visiting Committees of Pauper Lunatic Asylums	—	—	3,089	3,089	43,679	43,679
Churchwardens (Church rate)	30,667	31,462	5,724	5,724	5,576	5,576
Highways: London, City, Regent's Park, &c.	72,982	72,470	—	—	—	—
School Board for London	—	—	1,758,868	2,008,868	1,738,554	1,960,248
Bridge and Ferry Trustees	49,667	50,739	—	—	—	—
	3,291,534†	8,078,246†	11,272,309	12,149,479	10,547,682	11,986,436
(b.) Extra Metropolitan.						
Municipal Corporations	—	—	3,385,703	3,750,133	2,789,930	3,174,120
Borough Urban Sanitary Authorities	—	—	12,627,422	15,092,844	12,840,647	15,779,737
Other Urban Sanitary Authorities	3,779,500	7,016,983	3,559,982	4,417,155	3,576,528	4,418,417
Joint Boards	—	—	124,408	242,083	141,299	273,195
Highways (Boroughs)	20,510	21,622	—	—	—	—
Commissioners of Baths and Washhouses*	—	—	1,412	1,412	1,642	1,642
Markets and Fairs Commis- sioners	57,922	57,947	5,056	5,056	3,861	3,861
Harbour, Pier, and Dock Authorities	1,945,805	2,071,796	2,768,664	3,109,327	2,659,321	3,000,867
School Boards (Boroughs)	—	—	1,835,386	2,228,444	1,925,463	2,302,556
	3,803,737	9,168,348	24,308,033	28,846,454	23,938,691	28,954,395

* No returns were received from these authorities before 1882.

† The sums received and expended in 1868 by the County Authorities of Middlesex, Surrey, and Kent in respect of the areas then forming parts of those counties, but now in the county of London, are included in the receipts and expenditure of County Authorities under the heading "Urban and Rural."

‡ The receipts and expenditure of the Commissioners of Police of the Metropolis have been apportioned between the metropolitan and extra-metropolitan parts of the district, on the police rates received from those parts in 1868, and on the Rentals for the Police Rates in 1890-91.

Local Authorities.	1868.		1890-91.			
	Receipts, including Loans.	Expenditure, including that out of Loans.	Receipts other than from Loans.	Receipts, including Loans.	Expenditure not defrayed out of Loans.	Expenditure, including that out of Loans.
URBAN AND RURAL.	£	£	£	£	£	£
Poor Law Authorities (Extra Metropolitan).....	7,022,665	6,971,283	5,845,759	6,036,840	7,231,611	7,412,487
County Authorities	*2,292,948	*2,319,348	5,146,821	5,256,281	3,967,547	4,054,666
Commissioners of Police of the Metropolis (Extra Metropolitan)†	130,011	131,716	403,304	436,963	382,980	397,816
Visiting Committees of County and Borough Pauper Lunatic Asylums	—	—	83,907	83,907	245,178	245,178
Port Sanitary Authorities	—	—	382	1,382	9,875	10,743
Burial Boards (Extra Metropolitan)	173,316	174,450	394,462	455,225	380,557	444,218
Bridge and Ferry Trustees	84,905	85,203	3,401	3,401	2,886	2,886
Commissioners of Sewers	46,410	50,941	52,580	55,880	53,844	56,688
Drainage, Embankment, and Conservancy Boards	198,947	154,325	494,937	537,777	490,676	497,711
Salmon Fishery Conservancy Boards	—	—	13,264	13,264	13,531	13,531
Churchwardens (Church rate) (Extra Metropolitan)	271,073	274,063	—	—	30	30
School Boards (Extra Metropolitan) (excluding boroughs and purely rural parishes)	—	—	858,119	995,396	852,216	1,000,879
Turnpike Trustees	—	—	3,052	3,052	4,138	4,138
County Roads Boards, } South Wales	1,023,565	1,059,073	—	—	—	—
Sea Fisheries Committees	—	—	—	—	319	319
	11,243,838	11,220,402	13,299,988	13,879,368	13,635,388	14,141,290
RURAL.						
Rural Sanitary Authorities	—	—	491,526	656,095	510,661	680,426
Conservators of Commons	—	—	200	200	218	218
Inspectors under the Lighting and Watching Act, 2 & 3 Will. IV, c. 90	82,133	79,116	24,322	24,322	24,522	24,522
Highway Authorities	1,390,677	1,382,091	1,353,276	1,355,476	1,326,196	1,329,801
School Boards (excluding parishes partly urban)	—	—	687,771	748,020	679,320	739,989
	1,472,810	1,461,207	2,557,095	2,784,113	2,540,917	2,774,956
Totals	29,811,919	29,928,203	51,437,425	57,659,414	50,662,678	57,857,077

* The sums received and expended in 1868 by the County Authorities of Middlesex, Surrey, and Kent in respect of the areas then forming parts of those counties, but now in the county of London, are included in the receipts and expenditure of County Authorities under the heading "Urban and Rural."

† The receipts and expenditure of the Commissioners of Police of the Metropolis have been apportioned between the metropolitan and extra-metropolitan parts of the district, on the police rates received from those parts in 1868, and on the Rentals for the Police Rates in 1890-91.

Conclusions.

In 1868 the expenditure of local authorities, excluding loan expenditure, was 24,740,000*l.*, of which—

£	
16,500,000	was met by rates, <i>i.e.</i> , by direct local taxation.
3,652,000	by tolls, dues, and other indirect local taxation.
951,000	„ Treasury subventions.
1,028,000	„ sales or rents of property, and
2,609,000	„ miscellaneous receipts.

In 1890-91 the expenditure of local authorities, excluding loan expenditure, was 50,662,000*l.*, of which—

£	
27,818,000	was met by rates, <i>i.e.</i> , by direct local taxation.
3,474,000	by tolls, dues, and other indirect local taxation.
7,186,000	„ Treasury subventions.
1,741,000	„ sales or rents of property.
6,836,000	„ gas and water rates and revenues.
3,607,000	„ other miscellaneous receipts.

In 1868, of the total 16,504,000*l.* rates raised—

£	
3,703,000	were raised in London.
3,027,000	in other purely urban districts.
8,358,000	„ extra-metropolitan districts, partly urban and partly rural.
1,416,000	„ purely rural districts.

In 1890-91, of the total 27,818,000*l.* rates raised—

£	
7,930,000	were raised in London.
9,583,000	in other purely urban districts.
8,196,000	„ extra-metropolitan districts, partly urban and partly rural, and
2,109,000	„ purely rural districts.

In 1868 the rateable value of England and Wales, according to the poor rate valuation, was 100,612,000*l.*, of which 16,946,000*l.* was the rateable value of London. The rateable values of extra-metropolitan urban districts for that year cannot be separated from those of rural districts.

In 1890-91 the total rateable value was 152,116,000*l.*, distributed as follows:—

£	
London	31,597,000
Boroughs.....	43,545,000
Other urban districts.....	23,696,000
Rural districts	53,278,000

The amount of rateable value per head of the population was, in 1891—

	£	s.	d.
In London	7	10	1
„ boroughs.....	4	1	11
„ other urban districts.....	3	19	7
„ rural districts.....	6	10	—

In 1868 the average rate in the £ of all rates for the whole of England and Wales, calculated on the poor rate valuation—

	<i>s.</i>	<i>d.</i>
Was	3	4
In 1890-91 it was.....	3	8

In 1868 the average rate in the £ of all rates for London, calculated on the same principle—

	<i>s.</i>	<i>d.</i>
Was	4	4½
In 1890-91 it was.....	5	—

In 1868 the average rate in the £ of all rates for extra-metropolitan urban districts cannot be ascertained.

In 1890-91 it was—

	<i>s.</i>	<i>d.</i>
In county boroughs.....	4	6½
„ non-county boroughs	4	4½
Other urban districts	3	11

In each of these classes of districts the average rate in the £ had risen very considerably since 1868.

In rural districts the average rate in the £ of all rates in 1868 (excluding certain rates raised by commissioners of sewers and drainage and embankment boards, which are levied in a limited number of counties)—

	<i>s.</i>	<i>d.</i>
Was.....	2	7½
In 1890-91 it was.....	2	3

The fall in the rate in the £ of rural rates was mainly due to the fall in the poor rate levied to meet the expenses of poor law authorities. It was also attributable to the disappearance of the church rate, and to a fall in many counties in the highway rate and the county rate. As against these falls, the new rural sanitary rates and rural school board rates had come into existence since 1868. But the decreases in the rate in the £ of the old rural rates, *i.e.*, the poor rate, the highway rate, and the county rate, were considerably greater than the average rates in the £ of the new rural rates.

The urban ratepayers participated in the benefits arising from the fall in the rate in the £ of the poor rate and the disappearance of the church rate, and in some counties from the fall in the county rate; but these benefits were more than counterbalanced by the rise in the rates in the £ of the modern urban rates, especially the urban sanitary rates and the urban school board rate.

The modern sanitary rates press with severity on the ratepayers in towns where the aggregation of large populations in comparatively small areas necessitates the provision of costly schemes of sewerage, scavenging, water supply, and other works of primary sanitary importance which cannot be neglected without serious danger to the public health.

At no time during the present century, for which statistics are available, has the average rate in the £ of the rural rates been so low, or that of the London rates so high, as during the years 1890-91.

In extra-metropolitan urban districts the average rate in the £ of the new rates raised was also higher in 1891 than in any previous year.

In 1868 the amount of the local debt was not known. It may be estimated at about 60,000,000*l.* In 1890-91 it exceeded 201,000,000*l.*, of which—

£

41,000,000	was owing by London.
143,000,000	by other urban districts.
13,300,000	by extra-metropolitan districts, partly urban and partly rural, and
3,900,000	by purely rural districts.

The amount of the local debt per head of the population was—

	£	s.	d.
In London.....	9	15	2
„ other urban districts.....	8	12	2
Extra-metropolitan districts, partly urban and partly rural	—	10	10
In rural districts	—	9	6

The amount of direct local taxation borne by lands (including tithes and the other properties included in the definition of “lands” in the income tax valuation), which was estimated by Mr. Goschen to have been 6,733,000*l.* in 1817, and 5,500,000*l.* in 1868, I estimate to have fallen to at least 4,259,000*l.* in 1891.

The amount of direct local taxation borne by houses and other property (excluding lands), which was estimated by Mr. Goschen to have been 3,370,000*l.* in 1817, and 11,000,000*l.* in 1868, I estimate to have risen to at least 23,560,000*l.* in 1891.

The burdens of local taxation on lands were found, in 1868, to be not heavier than they had been at various periods of the century, nor so heavy as in most foreign countries. The house property, on which the rates have since risen, was, in Mr. Goschen’s opinion, very heavily taxed in 1868. And in connection with the burdens on these two classes of property, he expresses the opinion “that in proportion as a larger share of taxation is levied in respect of houses than of land, so does the amount paid by the occupier and not by the owner increase.” Assuming this proposition to be correct, the position of landowners, so far as local taxation is concerned, had improved in 1891, while the burdens on occupiers of houses had greatly increased.

The amount of imperial taxation transferred to the local taxation (England) account under the provisions of the Local Government Act, 1888, and the Customs and Inland Revenue Act, 1890, was—

	£
In 1890	4,805,940
„ ’91	6,008,615
„ ’92	6,429,079

The grants which were discontinued by the Local Government Act amounted to 2,860,384*l.* The additional grants in aid of the local taxation of England and Wales which were given by the legislation of 1888 and 1890 have therefore now reached the sum of 3,568,695*l.* This sum, as distributed, amounted—

In London to 4*4d.*
 „ county boroughs to 6*d.* and
 „ administrative counties to 5*8d.*

in the £ on the poor rate valuation.

The entire Treasury subventions (including not merely payments to the several local authorities, but also other charges of a local nature borne by annual votes of Parliament) rose from 1,420,000*l.* in 1868 to 11,846,482*l.* in 1892.

Spread evenly over the poor rate valuations of the two years, the former sum was equivalent to 3½*d.*, and the latter to 1*s.* 6¼*d.*, in the £.

Having regard to the rapidly increasing demands made on local authorities, urban and rural, for disbursements in respect of the several matters within their jurisdiction, it is evident that the local expenditure—which, excluding loan expenditure, exceeded 50,000,000*l.* in 1891—will continue to increase.

III.—*Emigration and Immigration in 1892.*

THE returns for 1892 show a slight diminution on the figures for 1891. The gross emigration from the United Kingdom to places out of Europe and not bordering on the Mediterranean amounted last year to 321,397, against 334,543 in 1891—a diminution of 13,146. Of these emigrants 210,042 in 1892, and 218,507 in 1891 were British and Irish—a diminution of 8,465. The immigration from these same trans-oceanic countries amounted in 1892 to 143,747, and in 1891 to 151,369, a decrease of 7,622, and the decrease in British and Irish immigrants (97,780 in 1892, and 103,037 in 1891) was 5,257. The excess of emigrants over immigrants in 1892 was therefore 177,650; in 1891 it was 183,174, that is, a decrease of 5,524; while the excess of British and Irish emigrants was 112,262 in 1892, and 115,470 in 1891, representing a decline of 3,208.

Considering now the immigration from Europe and ports on the Mediterranean Sea, we get the following summary:—

	1891.	1892.	Decrease.
Number of immigrants.....	504,445	490,165	14,280
„ emigrants	418,003	405,998	12,005
Excess of immigrants	86,442	84,167	2,275

Deducting this balance of 84,267 from the excess of emigrants to trans-oceanic countries, namely, 177,650, we arrive at a total *net* emigration from the United Kingdom to all parts of the world of 93,483.

With regard to the number of aliens who have arrived in this country for permanent settlement, it was found above that the excess of British and Irish emigrants to trans-oceanic countries was 112,262, and as the total net emigration is only 93,483, it follows that the difference, viz., 18,779, represents the *maximum* number of aliens who have settled in the United Kingdom. But from this total we have to deduct 10,349 seamen (mostly Scandinavians) who come over as passengers in order to ship here as crews of vessels leaving our shores. According to the Alien Lists, again, it appears that there were 22,137 aliens (other than seamen) arriving in the kingdom from European ports, who were not stated to be *en route* to other countries. This number is made up as follows:—

	1892.	1891.
Russians and Poles	7,538	12,607
Norwegians, Swedes, and Danes	4,367	4,647
Germans	5,765	5,817
Dutch	839	911
French	910	1,453
Italians	783	734
Other nationalities	1,935	2,101
	22,137	28,270

Of these, it is practically only the Russians and Poles who constitute the "pauper aliens" who settle in London, and subtracting the number who are forwarded to America and elsewhere by Jewish charitable bodies and others, it would seem that not more than 3,000 settled in London during the year, or, 5,000 in the whole kingdom. Reports from the Commissioners of police in the different large towns point to the fact that the number of arrivals of this class have been much fewer than during preceding years; and reports from H.M. Consuls at various Baltic and North Sea ports confirm this. The only exception is Leeds, where the chief constable reports an increase of 1,500 in the Jewish population, and also great poverty among them.

There has been a certain change in the destination of the emigrants in 1892, the most noticeable points being a diminution in the number going to the United States, and an increase in those going to British North America.

Nationalities and Destinations of Passengers to Non-European Ports.

Nationality.	To United States.	To British North America.	To Austral- asia.	To Cape and Natal.	To all other Places.	Total, 1892.	Total, 1891.
English	84,667	19,937	12,188	8,492	8,531	133,815	137,881
Scotch	16,406	1,938	2,030	1,281	1,670	23,325	22,190
Irish	48,966	1,379	1,732	118	707	52,902	58,436
TOTAL BRITISH and IRISH ... }	150,039	23,254	15,950	9,891	10,908	210,042	218,507
Foreigners	85,182	18,612	233	1,750	1,574	107,351	112,275
Not distinguished ...	—	—	—	—	4,004	4,004	3,761
Total, 1892	235,221	41,866	16,183	11,641	16,486	321,397	334,543
„ '91	252,016	33,752	19,957	10,686	18,132	334,543	—

Of the trans-oceanic passengers, 78,142 (or 24 per cent.) were cabin passengers and 243,255 (76 per cent.) were steerage passengers. The number of cabin passengers shows an increase year by year, the excess over 1891 being 3,861; but there is a decrease of 17,007 in the steerage passengers, who probably represent the “emigrants” in the more restricted sense of the word.

As regards the oscillations which have been observed in the curve representing the annual migration, a reference to the report for 1891 (*Journal*, 1892, p. 314) shows that “it would seem that 1890 marked the lowest point of a short cyclical movement from a maximum of emigration reached in 1887-88, and that an upward movement commenced in 1891.” This upward movement has not been continued during the year 1892. Mr. Simmonds states in the report for the year 1892 (p. 8) that “the event has thus shown that the slight increase in emigration in 1891 was not, as appeared to be possible, the beginning of a new upward movement, but only a slight variation upwards during a period of comparative stationariness. It is probable, however, that the ordinary oscillations in emigration, especially the emigration of foreigners, have been disturbed lately, on the one hand by the special circumstances which have determined a large movement of population from the eastern parts of Europe, and on the other by the measures hampering the emigrant passenger movement taken by various governments in the course of last year, mainly in consequence of the prevalence of cholera in Europe. In particular, the quarantine regulations brought into force by the United States authorities operated in restriction of emigration from Europe by increasing the cost of transit, as also, in the case of foreigners coming to the United Kingdom *en route* for America, did the precautionary measures taken by the port sanitary officials in this country after the appearance of cholera at Hamburg in August.” In this connection the following table, giving the immigration from Hamburg and all European ports, and the trans-oceanic emigration

during each month of 1891 and 1892, is interesting. For the first five months of 1892 the immigration from Hamburg and other European ports was considerably in excess of that for previous years (especially in May); in June it was about the same, in July and August it was considerably lower, and in the remaining months of the year the immigration from Hamburg was practically *nil*, that from all ports suffering a corresponding diminution, and being far below the figures for 1891. Up to the end of May the excess of immigration in 1892 over 1891 from Hamburg was about 6,000, and from all ports 14,500. As regards emigration to America, &c., the only serious decrease is in September and October. The month of September alone accounts for the whole annual decrease in the immigration from Europe and in the emigration to America. As regards the present year, the recovery in the case of Hamburg is very slow, the numbers arriving thence during the first five months of 1893 being only about one-quarter of the number who arrived in the same months of 1892; but the immigration from all European ports (including Hamburg) during May had almost reached the figure of 1892, and was above the figure for 1891. The trans-oceanic emigration till the end of May was normal.

	Immigration.*						Emigration* (Trans-oceanic).		
	From Hamburg.			From all European Ports.					
	1891.	1892.	Increase or Decrease.	1891.	1892.	Increase or Decrease.	1891.	1892.	Increase or Decrease.
January.....	1,374	2,759	+ 1,385	3,646	4,795	+ 1,149	11,003	10,973	- 30
February	2,666	3,485	+ 819	5,831	7,875	+ 2,044	13,990	12,838	- 1,152
March	3,974	4,482	+ 518	13,941	14,714	+ 773	25,282	30,235	+ 4,953
April	3,844	4,369	+ 525	15,383	17,132	+ 1,749	45,642	43,699	- 1,943
May	3,960	6,716	+ 2,656	13,442	22,295	+ 8,853	41,890	43,505	+ 1,615
June	6,693	6,229	- 464	16,875	16,571	- 304	30,480	35,536	+ 5,056
July	7,983	5,957	- 2,026	13,967	13,013	- 954	29,167	28,175	- 992
August	6,811	5,004	- 1,807	14,544	13,352	- 1,192	33,451	36,061	+ 3,610
September...	7,850	56	- 7,794	14,790	4,444	- 10,246	43,152	28,909	- 14,243
October	3,816	304	- 3,512	9,181	3,763	- 5,418	30,020	21,251	- 8,769
November....	4,774	386	- 4,389	9,192	4,559	- 4,533	18,453	18,986	+ 533
December ...	3,794	691	- 3,103	5,862	3,459	- 2,403	12,013	11,347	- 666
Total	57,540	40,438	- 17,102	136,654	125,962	- 10,692	334,542	321,515	- 13,028

* These figures, taken from *Board of Trade Journal*, are subject to slight correction, and the totals for the year are consequently not identical with those given above.

IV.—*Report on the Gothenburg System Regulating the Sale of Spirituous Liquor in Norway.*

[THE following is extracted and condensed from a recent Foreign Office Report, No. 279, 1893, by Thomas Michell, Esq., C.B., H.M. Consul-General for Norway.]

It is reported or alleged:—

1. That the “Gothenburg System,” as modified in Norway, is superior to the prototype institution, for while in Norway no private individual or public body is supposed to have a direct interest in the profits derived from the sale of intoxicating liquors, those profits are applied in Sweden to the direct reduction of public burdens, leading easily to the imperilment of “the purity of the motive in controlling the liquor traffic.”

2. That to the adoption and extension of that system in Norway is attributable “a very considerable reduction in the home consumption of spirits,” and all the beneficial results arising therefrom.

The object of the present memorandum is therefore to inquire into the correctness of those views and statements by the light of facts and figures drawn from Norwegian official sources.

1. *Particulars of the Norwegian System.*

Among the appendices to this memorandum is an official report issued by the Royal Statistical Bureau at Christiania, giving a detailed account of the working and the financial transactions of the associations (“*Samlagene*”) for the sale of spirits in Norway between the years 1876 and 1891.

It will be seen that at the end of 1891 the aggregate share capital of those associations was returned at about 33,000*l.*, and their accumulated reserve funds to about double that amount.

Up to the month of October, 1892, permission had been given to fifty-one towns and hamlets for the establishment of the system, leaving only three small towns unprovided with it.

By the end of 1891 near 43 per cent. of the spirits consumed in Norway had been supplied by the associations, the net profits of which having meanwhile grown from 43,875*l.* in 1881 to 104,409*l.* in 1890.

The distribution of the profits realised in 1890 is shown in detail (Appendix I). It appears that 18½ per cent. of the aggregate surplus was applied to the promotion of education, apart from contributions towards museums, libraries, and gymnastic establishments, which may more or less be classed among “educational objects.”

Grants to asylums for children, &c., absorbed 8 per cent., while 14 per cent. was devoted to such objects of public utility as the improvement of streets, road making, waterworks, &c., which cannot strictly be included amongst objects that should be “dependent for their existence on the voluntary support of the public alone.”

Theatres and other places of amusement benefited to the extent of 6 per cent., but the "total abstinence" movement has been gradually receiving less support, only 1·4 per cent. of the profits having been devoted in 1890 to an object that may well be considered, at all events theoretically, identical with that of the associations, under their original organisation.

As a matter of fact, the original practice of applying all profits to philanthropic purposes has been more and more departed from during the last fifteen years, within which several towns have made contributions out of gains on the sale of spirits towards the construction of waterworks, public schools, and even of railways.

In this respect, therefore, there has been a tendency towards assimilation with the parent "Gothenburg system."

With regard to the absolute "purity of motive" that impels the establishment of spirit associations in Norway, there is reason to challenge it.

In the first place, a preferential payment of 5 per cent. on the shares of the associations is an exceedingly strong inducement for promoting the prosperity and extension of the associations. Their 400 kr. (about 22*l.*) shares have never fallen below par, and when money is cheap they fetch as much as 430 kr. in the financial market.

The right reserved to municipalities to buy up at par, within a certain number of years, all the shares of an association, alone prevents the shares from being constantly at a premium.

The best Government securities (loans) and the bonds of the Land Mortgage Bank of Norway do not yield a higher rate of interest than 3 per cent. to 4 per cent. Their value is at the same time liable to be swayed by a variety of circumstances. The financial credit of Governments, as well as that of land mortgage banks, comes and goes, but as drink is likely to go on for ever, to an extent, at least, that cannot fail to give its vendors a benefit of 5 per cent. on invested capital, it is not surprising to find that all the towns in Norway have been eager, if only from that point of view, to avail themselves of the advantages offered by the "Gothenburg system."

But another, not inconsiderable, advantage accrues from holding shares in the associations.

The disposal of the surpluses, after payment of 5 per cent. interest, bestows power, political as well as social, on shareholders guided solely, at their annual meetings, by their own discretion or interest in the allocation of grants. Exceptionally, communal representatives attend to give advice or urge claims at those meetings.

2. *The Consumption of Spirits in Norway.*

It has constantly been asserted that the introduction of the "Gothenburg system" into this country has been followed by a diminution, represented as considerable, in the rate of consumption of spirits per head of the population.

In the first place, inquiry must be made into the existence and extent of such diminution, and in the second to study and

estimate the influence exercised in that direction by the associations.

1. Table I in the Appendix certainly establishes the fact that in 1876, when the associations accounted for only 8·3 per cent. of the total consumption of spirits in Norway, the rate of consumption per head of the population was 6·77 litres,⁵ and that the rate fell rapidly to 3·28 litres in 1879, when the associations provided 24½ per cent. of the aggregate consumption.

In the following year there was a rise to 3·90 litres per head, followed in 1881 by a fall to 3·02 litres, the lowest rate indicated in the table being 2·85 litres (in 1887).

Since 1888 an upward movement in the rate of consumption has manifested itself, resulting, in 1891, in a rise to 3·66 litres.⁶

It is therefore evident that the rate of consumption per head has fluctuated both before and after the introduction of the "Gothenburg system," and that for the last three years it shows a not inconsiderable increase, especially in 1891, when the consumption per head was 17·3 per cent. greater than in 1890.

The only notable decrease in the rate of the consumption of spirits in Norway since the establishment of the associations occurred between the quinquennial periods 1876-80 and 1881-85, the average rate between those periods having fallen by 30½ per cent.

It is for this sudden fall that those interested in the associations have been prone to take credit.

But it is essential to inquire under the next head to what extent that assumption is correct.

2. The influence exercised by the associations in the diminution of the consumption of spirits in Norway.

The table in Appendix II, compiled by the writer of the present memorandum from figures given in Norwegian official publications, exhibits the significant fact that the remarkable falling off in the consumption of spirits between 1876-80 and 1881-85 was accompanied by an almost corresponding decrease in the use of tobacco, which is mostly chewed by the bulk of the rural and labouring classes in Norway.

And yet the associations do not supply that form of intoxicant, which can be purchased freely at a low price throughout the country.

⁵ According to the standard work of Dr. O. J. Broch (*Le Royaume de Norvège, &c.*, Christiania, 1878) the previous rates per head were as follows:—

Years.	Average. Litres.
1851-55	6·3
'56-60	5·5
'61-65	4·4
'66-70	4·8
'71-73	5·2
'74-75	6·7

⁶ The Norwegian official estimate (3·68 litres in 1891) is based on the actual population, while the rates shown in Table I of the Appendices have been calculated on the registered population.

The subsequent fluctuations in the consumption of tobacco are, to some extent, in sympathy with the rise and fall in the consumption of spirits, notwithstanding that the duties levied on tobacco since 1875 have been increased to a greater extent than the customs duties on spirits, of which the rates naturally correspond with alterations in the excise dues.

An explanation of the great fall that took place between 1876-80 and 1881-85 in the consumption both of spirits and tobacco is to be found mainly in the economic condition of the bulk of the population, *i.e.*, of the agricultural masses, during those periods.

Towards the end of the seventies the marked changes in the mode of living of those classes, gradually brought about by education, wider inter-communication (resulting from the construction of roads, railways, and the extension of internal steamship navigation), and to some extent by the growing contact with travellers, native and foreign, had, in the period after 1880, almost entirely broken up the old Arcadian life of the "bonde" (peasant proprietor), so highly admired by Mr. S. Laing during his travels between 1834 and 1836.

In those halcyon days almost everything consumed or used on a farm was produced on it, the communal taxes were low, and indebtedness under mortgages comparatively small. Consequently the spare cash of the "bonde" was more or less freely available for the purchase of drink and tobacco, then also much cheaper.

In this connection it is necessary to explain that under the old and still existing law of the country, sons and daughters are entitled to an equal share in the father's estate, the oldest member of the family having the right to buy out his co-heirs. These arrangements have compelled recourse to loans, originally from the Bank of Norway, founded in 1816; next from the Land Mortgage Bank, established in 1852 to assist landowners in the extinction of private mortgages and in the consolidation of their old debts; and at last from the more modern savings banks, indebtedness having meanwhile also increased under second mortgages or bonds to lawyers (by whom the country is overrun), and to the store-keepers, from whom credit was obtained in the purchase of coffee, sugar, and (increasingly) of various articles of modern necessity.

The impoverishment of the peasant masses in these circumstances was attested by the quinquennial reports of the prefects (governors of the provinces) for the years between 1876 and 1880. Mortgages, distraints, sales, &c., had largely increased. Credit had been misused on a large scale, and its facility had induced the population to live beyond its means; while the indebtedness, except in relatively few cases, had not been incurred for productive purposes.

The communal taxation for local purposes had been growing from 1853, when it amounted to 167,000*l.* In 1880 it had reached the sum of 497,000*l.*, the largest item in the expenditure being "poor relief," which represented very little less than half the total annual liabilities of the rural communal administration.

In 1880 and 1881 the number of persons in receipt of relief

from the rural communities was a little over 7 per cent. of the population,⁷ while in 1881 the corresponding numbers were 3 per cent. in England and Wales, 2·6 per cent. in Scotland, and (exceptionally) 11 per cent. in Ireland.⁸

Simultaneously the rate of emigration from Norway (between 1881 and 1883) ranged from 1·3 and 1·5 of the population, almost exactly as in Ireland.

On all these grounds it may safely be concluded that the great diminution in the drink bill in 1881-85, credited to the associations, was almost entirely the outcome of the acute economic crisis through which the bulk of the consumers of spirits were then passing.

The subsequent fall and rise in the rate of consumption accord with the earnings of the people, especially in towns, to which the rural population is resorting more and more, and where wages have for some time been on the rise, as a result of the development of industries and of contingent labour combinations and strikes.

The drink bill of Norway has in fact oscillated, as in Great Britain, with the earnings of the lower classes, irrespective of any perceptible philanthropic influence on the part of the associations for the sale of spirits.

While official statistics show but little diminution in the rate of the consumption of spirits in Norway since the period when the great reduction in that rate occurred (1881-85), and, on the other hand, that the rate has for the last three years been growing, it cannot be denied that outwardly, and especially in towns, there is a decrease of cases of gross inebriety.

This can well be accounted for by the greater vigilance of the police and the increase of its strength and efficiency. The penalties for public drunkenness have been made more severe, and where the shops or bars of the associations are well conducted, a smaller number than formerly of besotted people are to be found in the streets of a town.

Dram drinking appears to be on the decrease where "bars" are not conveniently available, but chiefly because drinkers of drams have, with their native sagacity as to the value of money, discovered that it is more profitable to buy spirits by the bottle, from which a greater number of drams can be extracted at home at a smaller cost per dram.

Out of the towns, however, the continued excessive use of spirits is often painfully apparent.

APPENDIX I.

*Report of the Statistical Bureau, Christiania, Condensed and
Translated by T. Michell.⁹*

Up to the month of October, 1892, permission was given (under the law of 3rd May, 1871) for the establishment of such associations in fifty-one towns, incorporated or otherwise.

⁷ Including the urban population, the number of persons in receipt of relief amounted to 8 per cent.

⁸ In 1879 it was $7\frac{1}{2}$ per cent., and in 1883 about 8 per cent. of the population.

⁹ Further condensed by the Editor, *Statistical Journal*.

At the end of 1891 their aggregate share capital amounted to about 33,000*l.* and their aggregate reserve fund to about double that amount.

There are now only three small towns (with a minimum population of 800) and a special communal administration in which an association for the sale of spirits does not exist.

The following table illustrates the activity of those associations between 1876 and 1891, the consumption of spirits in Norway being calculated partly on the basis of production of import and export, partly on the sales effected by the associations. As regards the total consumption, the figures refer to a strength of 50 per cent., whereas in the case of sales by the associations they have been entered as returned by the latter, without indication of the percentage of proof. Returns obtained, however, in 1888 from fourteen of the larger associations show that the average strength of the spirits sold by them was 44·22 per cent.

Nevertheless, the somewhat higher percentage adopted in calculating the total consumption gives an approximately accurate result, for it partly counterbalances the deduction, which would otherwise have to be made, for the quantity of alcohol used for industrial purposes.

It is probable that the sales by the associations in relation to the total consumption of spirits in the kingdom are slightly overstated in the table, but in any case the estimate made of the total consumption of spirits is not thereby affected.

TABLE I.—*Home Consumption of Spirits in Norway during the Years 1876-91.*

Year.	Population Registered, 1st January.*	Total Estimated Home Consumption.		Of which Sold by the Association.	Consumption per Head of Population.	
		Litres †	Imperial Gallons ‡		Litres.	Quarts.
				Per cent.		
1876	1,813,000	12,268,000	2,699,000	8·3	6·77	5·95
'77	1,834,000	11,067,000	2,435,000	14·8	6·03	5·30
'78	1,860,000	8,472,000	1,642,000	22·2	4·55	3·53
'79	1,886,000	6,192,000	1,362,000	24·5	3·28	2·90
1880	1,912,000	7,462,000	1,642,000	21·0	3·90	3·43
'81	1,921,000	5,803,000	1,277,000	30·1	3·02	2·66
'82	1,921,000	7,240,000	1,591,000	25·5	3·76	3·31
'83	1,916,000	6,357,000	1,399,000	34·1	3·32	2·90
'84	1,922,000	6,692,000	1,472,000	34·1	3·42	3·06
'85	1,938,000	6,840,000	1,505,000	32·1	3·52	3·11
'86	1,950,000	5,905,000	1,299,000	41·4	3·10	2·70
'87	1,954,000	5,569,000	1,225,000	43·2	2·85	2·51
'88	1,979,000	6,026,000	1,326,000	40·1	3·05	2·67
'89	1,980,000	6,338,000	1,394,000	41·8	3·20	2·81
1890	1,986,000	6,206,000	1,361,000	49·1	3·12	2·74
'91	2,001,000	7,328,000	1,613,000	42·9	3·66	3·22

* This column has been filled from other official publications of the Central Statistical Bureau, Christiania. The registered population is about 2½ per cent. in excess of the actual population.

† 50 per cent. below proof.

‡ The litres have been converted at the rate of 4,500 litres equal to 990 imperial gallons.

The estimate of the total consumption and the returns of the sales of the associations show that the consumption of spirits in Norway reached a minimum in 1887, but that subsequently it has exhibited a remarkable increase.¹⁰

According to the returns given by the associations the sales in quantities of 40 litres (8 gallons 3 quarts) and above that quantity amounted to 3·6 per cent. of the total sales.

In the years immediately preceding that proportion was as follows:—

Year.	Per Cent.	Year.	Per Cent.
1887	5·1	1889	4·1
'88	4·5	'90	4·0
			Amount.
			£
The gross receipts of the associations in 1891 amounted to			185,096
And their expenses to.....			100,979
Leaving a net gain (including transfers to reserve funds and depreciation of real property, stock, and fixtures) of			84,117

In 1890 the corresponding profit was 76,924*l.*, or considerably less than in 1891.

If from this net gain of 84,117*l.* we subtract 293*l.*, which were added to the reserve fund, and 1,913*l.* written off real property and fittings, and add 31,830*l.*, which was expended by the associations in communal taxes (6,346*l.*), excise on spirits (13½ öre per litre, or 9*d.* per gallon, 22,533*l.*), and beer and wine licences (2,951*l.*), during the same year, the sums derived by towns from the gross receipts of the associations amounted altogether to 113,741*l.*

With a corresponding calculation in respect of the years between 1881 and 1891, the figures appear as follows:—

Year.	Amount.	Year.	Amount.
	£		£
1881	43,875	1886	65,417
'82	46,286	'87	67,913
'83	52,670	'88	77,286
'84	59,334	'89	90,378
'85	62,226	'90	104,409

There has thus been a considerable annual increase in the benefits received by towns from the sale of spirits (and partly of beer and wine) by the associations.

The average benefit between 1881 and 1891 has been 71,230*l.* per annum.

No complete account of the application of the surplus at the disposal of the associations in 1891 is so far available.

It is therefore only possible to give the following return of the appropriation of this aggregate surplus in 1890.

As already stated, the surplus in 1890 amounted to 73,527*l.*, to which has to be added the unappropriated balance of previous years, namely, 1,823*l.*, making a total of 75,350*l.*

This amount was applied by the associations then established, as shown in the accompanying table.

¹⁰ These two lines are in italics in the original report.

Number.	Description.	Amount.
		£
1	Home mission.....	519
2	Church buildings	964
3	Other church or religious objects	700
4	{ Museums, collections, and other scientific } objects.....	2,944
5	Libraries, reading rooms, and reading societies	1,167
6	Schools (national), buildings	4,843
	Libraries and collections	169
	Other grants	503
7	Schools, middle and higher, buildings	1,197
	Libraries and collections	109
	Other grants	1,238
8	{ Evening and Sunday schools, schools for } seamen, technical schools, workmen's } academy, &c.	2,543
9	Schools of domestic industry, housekeeping, &c.	2,843
10	Grants to artisans, &c.	147
11	Asylums for children, &c.	5,819
12	Magdalene Asylum	75
13	Young men's association	648
14	{ Total abstainers' association and abstinence } movement	1,007
15	Labourers' homes, &c.	947
16	Seamen's " "	164
17	Seamen's, artisans', and other societies	856
18	Public hospitals	3,567
19	Sisters of charity and hospital nurses.....	922
20	Sick and aid societies.....	856
21	Home for the poor.....	862
22	Support, care, and alimentation of the poor ...	2,255
23	Rifle association	87
24	Gymnastic association	631
25	Bathing houses' association	4,277
26	Drawing schools.....	631
27	Theatres, festive halls, and places of amusement	4,477
28	Music, singing	1,844
29	Other artistic objects	1,260
30	Contributions towards railway construction ...	1,694
31	Improvement of streets and road making	5,623
32	{ Other contributions towards means of com- } munication	2,385
33	Lighting of streets.....	282
34	{ Waterworks, laying down water pipes, house } sewage system	4,891
35	Fire station.....	296
36	Public parks, tree plantage, &c.	3,768
37	Medical service	113
38	Police	157
39	{ At disposal of communes for purposes not } further specified	882
40	Other purposes	1,464
41	Added to share capital or unapplied	2,924
	Total	75,350

It will be seen that, among the purposes to which the association surpluses have been applied, schools occupy the first place.

If technical, domestic industry, and other similar institutions be included, a sum equal to $18\frac{1}{2}$ per cent. of the aggregate surplus was appropriated to educational purposes, apart even from contributions to museums and collections, libraries, and gymnastic establishments, of which some may well be classed among educational objects.

The items next in importance are—

Description.	Per Cent.
Asylums for children, &c.....	8
Improvements of streets, road making	$7\frac{1}{2}$
Waterworks, &c.....	$6\frac{1}{2}$
Theatres, &c.	6

It will be seen from the foregoing statement that comparatively large sums are applied to the support of bathing houses, public parks, and hospitals.

It is interesting to notice the contributions that have been made by the associations for direct promotion of the total abstinence movement:—

Year.	Per Cent.	Year.	Per Cent.
1882	4'4	1887	2'8
'83	3'1	'88	2'2
'84	3'2	'89	1'7
'85	3'0	'90 (1,057 <i>l.</i>)	1'4
'86	2'6		

For the first time statistics have been supplied by a few of the towns in respect of intoxicated persons who have been sent away from the shops of the associations, or of minors to whom supplies were refused at such shops:—

Towns.	Number.		
	1889.	1890.	1891.
Christiania	43,934	53,374	54,898
Bergen	15,426	16,061	15,726
Trondhjem	2,973	4,418	4,138

The reports of some of the police offices in Norway render the following figures available with regard to the number of persons arrested for drunkenness, partly in connection with disorderly conduct in streets:—

Towns.	Number.		
	1889.	1890.	1891.
Christiania	7,554	10,096	11,602
Bergen	729	1,122	1,047
Trondhjem	533	437	563

APPENDIX II.

*Table comparing Consumption of Spirits and Tobacco in Norway.**

Years.	Home Consumption per Head of the Population.			
	Spirits.†		Tobacco.‡	
	Quantity.	Increase or Decrease.	Quantity.	Increase or Decrease.
	Litres.	Per cent.	Kilo.	Per cent.
1876-80, average	4·91	....	1·20	....
'81-85	3·41	- 30·5	0·85	- 29·2
'86-90	3·10	- 9·0	0·81	- 4·7
'86	3·10	+ 0·0	0·85	+ 4·9
'87	2·85	- 8·1	0·85	+ 0·0
'88	3·05	+ 7·0	0·79	- 7·1
'89	3·20	+ 4·9	0·78	- 1·3
'90	3·12	- 2·5	0·80	+ 2·6
'91	3·66	+ 17·3	0·85	+ 6·2

* Compiled from the official publications of the Statistical Bureau, Christiania, by T. M.

† Duty on spirits (in the cask) at 50 per cent. below proof:—

Years.	Per Kilogram.	Per Litre.	Remarks.
	Öre.	Öre.	
1876-77	64	51·8	Between 1876-80, increase from 51·8 öre per litre to 72·9 öre per litre, or 40·7 per cent.
'77-78	77	62·3	
'79	90	72·9	
'79-80	90	72·9	
'88	—	85·1	
'92	—	85·1	

‡ Duty on tobacco (in the leaf):—

Years.	Per Lb.	Per Kilogram.	Remarks.
	Öre.	Öre.	
1875	33·8	66½	Between 1875-79, increase from 66½ öre per kilo. to 100 öre per kilo., or 49 per cent.
'77-78	40·0	80	
'78-79	50·0	100	
'80	62·1	125	
'88	57·1	175	
'92	87·1	175	

APPENDIX III.

Return of the Number of Licences granted in Norwegian Towns and Hamlets in 1891 for the Sale of Ale, Wine, Mead, and Cider.

Towns.	Registered Population in 1891.*	Cost of Licence.	Number of Licences.	
			Total.	Of which, to Associations.
		£		
Christiania	150,444	14	217	14
Bergen	53,686	19	62	4
Trondhjem	25,051	22	35	7
Norway	472,325	—	617	168

* The actual population in towns on 1st January, 1891, was $2\frac{1}{2}$ per cent. less than the registered population.

APPENDIX IV.

*Official Estimate of the Consumption of Ale in Norway.**

Year.	Per Head of the Population.		Year.	Per Head of the Population.	
	Litres.	Imperial Gallons.		Litres.	Imperial Gallons.
		Galls. Qts.			Galls. Qts.
1883	23·1	5 —	1888	19·2	4 1
'84	23·9	5 —	'89	23·9	5 1
'85	20·1	4 1	'90	25·6	5 2
'86	17·3	3 3	'91	28·8	6 1
'87	18·8	4 —	'92	26·0	5 3

* Communicated by the Finance Department. The litres have been converted as previously.—T.M.

APPENDIX V.

The Norwegian Total Abstinence Societies, 1859-91.*

Year.	Number of Societies.	Number of Members.	Year.	Number of Societies.	Number of Members.
1859	1	30	1885	579	60,000
'64	11	1,700	'89	801	95,000 †
'70	18	1,900	'90	843	98,000 ‡
'77	67	9,000	'91	853	100,000 §
'83	328	35,000			

* Communicated by the Central Association at Christiania.

† Including 34,000 women and 6,000 children.

‡ " 41,300 " 15,000 "

§ " 43,000 " 15,000 "

[It should be mentioned that the Norwegian government, according to a telegram in the *Times* of 13th April, 1893, do

not consider Mr. Michell's report to be accurate, and have forwarded an official refutation for presentation to Lord Rosebery.—
EDITOR S. J.]

V.—*Disturbance of the Population Estimates in Australia by Defective Records.* By H. H. HATTEY, C.M.G., *Government Statistician of Victoria.*

[The following Paper was read before the Australasian Association for the Advancement of Science, at Hobart, on 8th January, 1892.]

IN the decennial period intervening between the censuses of 1881 and 1891 the population of Victoria actually increased by 278,059, but the apparent increase, or that arrived at by adding the excess of recorded births over recorded deaths to the excess of recorded arrivals over recorded departures by the seaboard during the same interval, was 345,046, or 66,987 more. In like manner in New South Wales, whilst the census showed an actual increase of 381,033, the apparent increase was 476,517, or as much as 95,484 more; in Queensland, whilst the actual increase was 180,193, the apparent increase was 212,206, or 32,013 more; and in South Australia (exclusive of the Northern Territory), whilst the actual increase was 38,798, the apparent increase was 65,071, or 26,273 more. Western Australia and the Northern Territory having little, if any, land communication with the other colonies, it is not necessary to take into account.

It is thus apparent that the census returns of 1891 showed a considerably smaller population in every one of the colonies treated of than that indicated by the numbers obtained at the previous decennial census added to the excess of births and arrivals over deaths and departures which had been recorded since that census was taken,—the total excess of the apparent over the actual population being 220,757.

It is evident that if an accurate census of all the colonies named was obtained in 1881 and again in 1891, which there is every reason to believe there was, and the births, deaths, arrivals, and departures occurring between the dates of those censuses had been recorded correctly, the apparent or calculated population of the part of Australia referred to would, in 1891, have equalled its actual or census population. This, of course, would only be the case for the colonies combined, not for the individual colonies, as no attempt is made to take a complete account of persons passing from one colony to another overland.

The fact, however, remains that, whilst in each one of the colonies every death which occurs is supposed to be registered and every departure to be recorded, and elaborate machinery is provided by the respective Governments to give effect to those operations, as many as 220,757 persons in ten years, or an average of over 22,000 per annum, managed to disappear from the eastern half of the Australian continent without their departure being noticed.

How is this leakage to be accounted for? The deaths which escape registration must necessarily be few, as in all the colonies it is illegal to bury a corpse until the death has been registered, and there is every reason to believe that this law is not evaded. The loss referred to must therefore take place by sea.

The captain of each vessel arriving in any Australian port is required to furnish a list of the number of passengers his vessel brings; and the captain of each vessel departing from any such port is required to furnish a list of the number of passengers his vessel takes away. These lists are, doubtless, very nearly correct so far as the arrivals are concerned, but not so as regards the departures,—the lists relating to which are systematically defective, as is admitted by the customs and immigration authorities, and by the captains of the vessels themselves. The manner in which the defects occur is as follows:—

All passengers who take their passages beforehand, or are known to be in a vessel when she sails, are included in the list furnished to the Government; but it almost always happens that passengers come on board at the last moment, even up to the time of the vessel's sailing, and are not known to be on board until after the vessel is at sea. They are then discovered or make themselves known, pay their passage money, and are duly entered in the list presented at the port of the vessel's destination.

From inquiries I have made I am led to believe that these defects occur but rarely in vessels sailing to distant countries, but they occur very commonly in those engaged in the inter-colonial trade. I am informed that quite a number of persons whose business or inclination frequently leads them to travel backwards and forwards between the colonies by sea habitually neglect to take their passages beforehand, and are consequently, as a rule, omitted from the records of emigration: indeed, the oftener they repeat the process of journeying from colony to colony the less necessity they seem to find for notifying their intention of taking a passage. The effect of this will be understood by the following illustration:—

A Melbourne man, having business in New South Wales, gets on board a steamer about to start for Sydney, and, not having taken his passage beforehand, is not included in the passenger list furnished to the Melbourne authorities, and is consequently still considered to form a unit of the Victorian population. His name is taken down between Melbourne and Sydney, is duly entered in the list furnished at that port, and he is set down as an addition to the population of New South Wales. His business in Sydney having been completed after a stay which may be long or short, as the case may be, he goes on board a steamer for Melbourne, again without taking his passage. He is therefore not included in the passenger list, and is still considered to be in New South Wales; but, being entered in the inward list furnished on the vessel's arrival at Melbourne, he is added to the Victorian record, and contributes one to the next quarterly estimate of population made and published. Thus every time he makes the round trip by sea he adds a fictitious unit to the estimate of the population of each

of the two colonies between which he travels, or two such units to the estimate of the population of the whole of Australia.

It will be observed that the errors thus arising do not cancel one another, as errors sometimes do, but are always in the direction of causing the departures to appear fewer, and consequently the inhabitants of the colony to appear more numerous than they really are.

As more men than women travel by sea between the colonies, and as, moreover, provision for comfort when travelling is more often attended to in the case of the latter than the former, a larger proportion of the passages of women than of men are generally taken beforehand, and the lists of females are the more complete in consequence, with the result that the disturbance to the population estimates is invariably less in the case of the female than in that of the male sex; and thus it was found on the last census day that whilst the apparent increase of the male population of the four colonies under notice was greater by 173,124 than its actual increase, the apparent increase of the female population of those colonies exceeded the actual increase by only 47,633.

It may be remarked that the disturbance to the population estimates through a considerable number of the departures not being recorded, whilst a close record is kept of the arrivals, is not peculiar to the Australian continent, but applies equally to the insular colonies of Australasia—the apparent increase of population between 1881 and 1891 having been greater than the actual increase by 15,092 in the case of New Zealand, and by 10,338 in the case of Tasmania.

It should moreover be pointed out that the number of unrecorded departures is, as a matter of fact, always greater than the figures show, inasmuch as whilst a practically complete registration of the deaths takes place as already stated, a considerable number of births in all the colonies escape the vigilance of the registering officers, and remain unrecorded. If this were not the case, the numbers showing the apparent increase of population would be obviously greater than those indicated. The births registered during the last intercensal period in the four continental colonies under notice numbered 891,388. Allowing 5 per cent. on this number for births not registered, or 44,569, which allowance is believed rather to understate than to exaggerate the truth, the total excess of the apparent over the actual population of those colonies would be increased from the number already quoted (220,757) to a probable one of 265,326, or an average of 26,500 per annum.

How is this disturbance to be avoided in the future? I have tried to remedy it so far as Victoria is concerned by correcting the outward passenger lists with the inward lists received from the other colonies of the group, and this answered fairly well whilst the steamers of the Peninsular and Oriental Company did not go further than Melbourne, and the Oriental, Messageries, and Austrian Lloyd's steamers were not running; but since so many lines of British and foreign steamers visit Melbourne, calling at Western and South Australia before they arrive, and going on to

New South Wales, and perhaps Queensland after they leave, the passengers from and to the various ports and places are so much mixed up in the lists that these afford no assistance whatever. If greater care were taken in recording the port at which the passengers embarked and that at which they signified their intention of disembarking, an interchange of lists might answer the purpose, but concert between the colonies is necessary to attain this end; and this will doubtless exist after federation has become a fact. But is it necessary to wait for federation, which may not be accomplished for years to come? I have more than once urged upon my Government the desirability of the immigration authorities of the various colonies meeting in conference with a view of better means being arrived at of obtaining a true record of the intercolonial migration; and I do not look for much improvement until this takes place. Were such a conference to be held, the statistical departments of the various colonies might be of considerable assistance to it, and this I am quite sure would be willingly rendered.

The defects I have drawn attention to indicate the desirability of a census being taken oftener than once in ten years, and add another argument, if such were needed, to the many cogent reasons which have often been adduced in favour of such a course. Much to the credit of Queensland and New Zealand, a quinquennial census is now taken regularly in both those colonies. In neither of them, it may well be assumed, is the Treasurer anxious to spend the public money unnecessarily; and it may be set down as a certainty that if the proceeding were not found to be advantageous it would be discontinued. It is much to be desired that the example set by these two colonies may, after this, be followed by every other colony of the group.

I believe that the majority of the statesmen of Australasia, especially those of them who are the most thoughtful and far-seeing, are in favour of the population being enumerated more frequently than it is at present; and I submit that the cost, which after all is not ruinous, ought not to stand in the way of a census being taken at least quinquennially. I have no hesitation in saying that the extra money expended would not be wasted, but would be found, in the end, to operate beneficially in the case of each one of the communities concerned.

VI.—*The Labour Department and the Labour Gazette.*

IN January last a new branch of the Board of Trade was formed under the title of the "Labour Department of the Board of Trade." Till then the collection of labour statistics had been confided to the Commercial Department. The new department will now be independent, although still under the same supervision as the Commercial and Statistical Departments of the Board of Trade, and with a sufficiently large staff, will be enabled to publish much more information, and that more quickly

than had hitherto been possible. The staff is under the general supervision of Dr. R. Giffen, C.B., and consists of a "Commissioner for Labour" (Mr. H. Llewellyn Smith), a "Chief Labour Correspondent" (Mr. John Burnett), and three other correspondents, of whom one is a lady. There are also some twenty-five local correspondents (mostly secretaries of trade unions, &c.), in the chief towns and manufacturing districts throughout the United Kingdom, and the London staff is completed by thirty clerks of various grades.

The chief means of giving to the public early information on all labour questions is the monthly *Labour Gazette*, of which the first number was issued in May. It is especially hoped that the facts concerning any particular trade being placed fairly before both employers and workmen, strikes may be averted, which are often entered upon owing to misconceptions as to the real state of the trade. The low price, 1d. monthly, of the *Gazette*, and large gratuitous circulation to free libraries, workmen's organisations, chambers of commerce, &c., which is contemplated, will no doubt materially help in effecting this object. The reports of the local correspondents which are established, or are being established throughout the kingdom, will form a conspicuous feature of the Journal.

The objects of the *Gazette*, and indeed, to a certain extent of the department itself, cannot be better stated than by quoting the first page, which is as follows :—

"The *Labour Gazette* is a journal for the use of workmen, and of all others interested in obtaining prompt and accurate information on matters specially affecting labour. It is intended to stand to labour questions in the same relation as the *Board of Trade Journal* to questions of trade and commerce. In other words, official information bearing on the interests of labour will be adapted for general use and made public, including information which the Department obtains from its correspondents largely for the purpose of publication.

"With mere questions of opinion the *Labour Gazette* will not be concerned. The aim of the Department in the publication is to provide a sound basis for the formation of opinions, and not to supply opinions. In performing this task there are three classes of materials which have to be dealt with. First, there is the information bearing on labour which is already collected and published periodically by various Government Departments, but which, as yet, is not readily accessible to the vast mass of workmen, either because it is buried in large and expensive publications, or because workmen have not, as a rule, the means of knowing when and how it can be obtained. There is again much useful information published by foreign governments, which is inaccessible to British workmen for the same reasons, with the additional barrier offered by an unfamiliar language. It is intended to collect and sift this information, to publish month by month such parts of it as can be included in the *Gazette*, and, so far as possible, to add references to the remainder. In the present number are included such items as the Monthly Report on the State of Employment,

the returns of Emigration and Immigration, and the summaries of various British and Foreign Reports, such as the last published Annual Report on Strikes and Lock-outs, Trade Unions, and other subjects.

"In the second place there is much information which is already obtained through various official channels, but which has hitherto not been published at all, or issued after the public interest in the subject has, to some extent, subsided. The Labour Department is enabled, by the courtesy of the various Government Offices concerned, to present, for the first time, monthly or quarterly reports on several matters which have hitherto been only the subject of less full or less frequent returns. As examples of such information in the present number, reference may be made to the list of trade unions, co-operative and friendly societies registered and dissolved during the month, the returns of pauperism in the chief industrial districts of the United Kingdom, of prosecutions under the Factory and Workshop Acts, and of accidents to railway servants and in factories and workshops.

"In the third place there are many matters of importance on which exact information has not hitherto been obtained, or at least has not been officially collected. Some of these questions will probably always elude exact investigation; many others will require to be made the subject of searching special inquiries before they are ripe for precise treatment in a monthly journal. There are, however, a few cases in which it is proposed at once to begin to break fresh ground. Thus, in the present number it is possible, through the Local Correspondents of the Department, connected for the most part with important trade organisations, to supply a series of statements from the workmen's point of view as to the conditions of employment in the chief centres of industry. With regard to one important group of irregularly employed labour in the port of London, the daily changes in the volume of employment are shown in the form of a chart, which, though referring only to a small fraction of the low-skilled labour of London, may to some extent serve as a useful barometer of employment, so far as concerns the waterside and carrying industries of the port. The Department would be glad to extend the information to waterside and other labour in other districts, and would welcome any suggestions to that end.

"An account is given in the *Gazette* of the chief labour disputes and changes in rates of wages and hours of labour of which information has been received during the month. In the preparation of these tables much valuable help has been given by trade unions, employers, and employer's associations. Arrangements have also been made for special short articles on important trade disputes, and such subjects as arbitration, conciliation, various methods of industrial remuneration, and the working of various laws bearing specially on labour. The trade disputes thus treated in the present number are the late Lancashire Cotton Dispute, and the Shipping strike now in progress at Hull.

"The Department is also endeavouring, chiefly through the machinery of the Workmen's Co-operative Societies, to obtain

returns of average retail prices of the chief articles of workmen's consumption, based on a record of actual transactions. The returns so far obtained are given, and will be repeated periodically. In addition, the Department has to thank the district secretaries of the Co-operative Union, for agreeing to supply materials for the monthly reports on co-operation.

"Through the courtesy of the Foreign Office, the Department will be able to give periodical reports on the state of labour, trade disputes, changes in wages, and labour legislation in the principal foreign countries, obtained specially for the purpose through the British Embassies and Consulates. The Colonial Office have also kindly arranged with the Emigrants' Information Office, which has already for some time collected information as to the demand for labour, and the conditions of employment in the principal British Colonies, to furnish the Labour Department with material for monthly reports, of which the first appears in the present number."

An interesting feature is a chart, in continuation of those prepared by Mr. Charles Booth, showing the number of men daily employed at the London Docks.

The Labour Department will also be charged with the continuation of the annual statements concerning strikes and lock-outs, trade unions, &c. Various special inquiries will also be undertaken into such subjects as the amount and causes of fluctuations of employment in certain trades and their effect on the conditions and efficiency of labour, attempts to relieve distress by providing relief works, national workshops, farm colonies, and the like, and the causes of their failure or success, child employment, noxious industries, &c.

VII.—*Census of Persons Using the Parks of the London County Council.*

THE number of persons entering parks under the control of the London County Council on Whit Monday last were counted by order of that body, and the following are the official figures:—

Name of Place.	Hours Open.	Total Number of Visitors.	Acreage.	Number of Persons per Acre.
Battersea Park	15½	109,783	198	554
Brockwell „	14	57,598	78	738
Clissold „	14½	68,223	53	1,287
Dulwich „	14½	33,607	72	467
Finsbury „	14½	89,881	115	782
Kennington „	14½	40,001	19½	2,051
Myatt's Fields	14½	8,546	14½	589
North Woolwich Gardens...	14½	28,485	10	2,848
Ravenscourt Park	14½	20,597	32	644
Southwark „	14½	91,074	63	1,446
Victoria „	17	303,516	244	1,244
Waterlow „	14½	49,255	29	1,698
Total	—	900,566	928	970

VIII.—*Notes on Economical and Statistical Works.*

La France et ses Colonies (Géographie et Statistique). Par E. Levasseur. Nouvelle édition. Paris: Charles Delagrave, 1890.

In these three volumes the eminent French economist presents a statistical account of his native country and of its colonies, which, for comprehensiveness of range and fulness of detail, has probably never been surpassed and is calculated to satisfy the most exacting demands of the most insatiable student. As M. Levasseur observes in his preface, the Frenchman reading this treatise may rise from its perusal with the conviction that he is a citizen of no mean state, endowed with a vigorous organisation and with powerful resources, and possessing a record of progress in the past which is a guarantee for similar advance in the future, and he may also rise with the belief that that future is less dependent on the natural advantages with which France has been lavishly endowed for centuries past, and will be for centuries to come, than on the excellence of the social order, the industrious activity of the people, and the wisdom of the government. It is indeed, in no ordinary sense of the word, an exact and adequate knowledge of his country which M. Levasseur has sought to convey in this monumental work. Such knowledge may be obtained, he observes, from history and from geography. But geography must not be understood in the narrow and merely physical sense. The physical characteristics of a country are indeed the foundation on which all else is reared; but man has left his own stamp on those physical characteristics. And so, to two books dealing with physical geography—with the soil and the climate—succeed three devoted to political geography—to history and politics, to questions of population and government. These are followed by three books on economic geography, treating of agriculture and industry, of the means of transport and the mechanism of commerce. Paris, from its great importance, next forms the subject of special study in a separate book. In these earlier parts of his work two different plans have been open to M. Levasseur. He might have divided his subject by districts, provinces and departments, and this would have lent itself more easily to picturesque description. He has preferred to follow a division by subject-matter, because it presents at once to the reader a general view of the whole, and of the relations of the parts to one another. But such a method necessarily results in some separation of the constituent elements of the subordinate groups, and, to correct this defect, a supplementary section is added containing a general *résumé* of the provinces and the towns. Finally in the eleventh and twelfth books Algeria and Tunis, and the other French colonies and protectorates, are investigated.

In dealing with this vast subject M. Levasseur has travelled outside the province of geography strictly so-called, even when it is considered under the triple aspects which he has distinguished. He has borrowed from history, from statistics, and even from

technology. History, by its connection of the present with the past, explains the actual condition of inhabited places. Technology assists in the comprehension of economic facts and the reason for their presence in the particular environment in which they are discovered. Statistics furnishes the numerical knowledge of a great quantity of social facts. It alone can afford the means of gauging their quantitative importance, and of instituting comparisons between different times and places. It is thus an indispensable ally of economic geography, and from its importance it deserves a place side by side with geography on the title-page of the book as an indication of its principal characteristics. This larger conception of geography M. Levasseur has endeavoured to introduce into the curriculum of secondary education in France. Geography should not, he maintains, be limited to a dry catalogue of names. It should furnish an accurate knowledge of a country. It should tell, not merely of its physical formation, but also of its natural riches, and not merely of its political divisions, but also of their *raison d'être* and of the wealth created by the labour of man. The earth is the theatre of human activity, and a complete study of the geography of a country consists in the relations of man to the earth. It then, and then only, ceases to be arid and uninteresting, and affords stimulus to the judgment, and interests the imagination, of the pupil. But the scope of M. Levasseur's present work is wider than the limits of secondary instruction would allow. It is enriched with a great quantity of statistical tables, and, wherever opportunity presents, the author employs some variety or other of that graphic method which he has done so much to popularise and to elucidate. In these statistics he does not profess to attain more than approximate certainty. They are not, he urges, to be treated as a precise expression of the facts; they are rather to be regarded as the official and most probable expression at a given date. In the first place, he points out, by its series of numbers and its curves the book endeavours to convey a knowledge of the history of facts; and in the second place to disclose, by the *ensemble* of its data, the condition of the country at a certain epoch. M. Levasseur refers in his preface to the most important authorities which he has consulted, consisting in the main of official sources.

We have endeavoured to indicate the spirit in which he has addressed himself to his great undertaking; we must now refer our readers for the examination of the manner, in which he has accomplished it, to the book itself. Here we have only space to afford some idea of the main divisions of his chapters. Book I is devoted to the soil of France, its situation, its geological character, its configuration, its waters, and its coasts. In the second book the climate is investigated, and, after examining its general characteristics, the author proceeds to the special circumstances of particular districts. With the third book he passes from physical to political geography, and considers the history and politics of his country. The origin of the French people, the territorial formation of the country, from feudalism onwards, under the Capetian dynasty, under the Valois and the Bourbons, the first Revolution, and the first Empire, and so to the Franco-German

war and the loss of the conquered provinces, the political divisions which have been established, and the nature of the boundaries by land and by sea, form the subject of this book. Then follows a book on population, and this again is succeeded by a book on administration. The central government, and the administration of the communes and departments, the public works, and the state properties, the army, the navy, the finances, the conduct of justice, and the direction of education, are successively reviewed. With the second volume of the work we pass to economic geography, with one book on agriculture and its various divisions, the tenure and treatment of the soil, the nature of the vegetable and the character of the animal products; another book on industry and its varieties; and a third book on the mechanism of commerce, the means of communication by land and by sea, the monetary system, the organisation of credit, and the nature and volume of domestic and foreign trade. In the ninth book Paris is investigated, and in the tenth a general *résumé* furnished of the provinces, the departments, and the towns. The third and concluding volume of the work is devoted to the colonies. This is divided into four main sections. In one, the origin and development of the French colonial possessions as a whole is set forth; in the second, the special characteristics of the most important of those possessions—Algeria and Tunis—are presented; in the third, M. Levasseur passes to the other possessions in Africa, in Asia, in Oceania, and in America; and in the fourth and final section a summary of the subject is supplied. Copious indexes follow in the appendices. M. Levasseur has spared no pains to make his book complete, and we venture to think that no more finished account of France of the kind has ever been, or is likely to be, presented than that to be found in this exhaustive treatise. It is a veritable *magnum opus*.

The Economy of High Wages. By J. Schoenhof. London: G. P. Putnam's Sons, 1892.

This book affords a fresh demonstration of what is rapidly becoming a commonplace in economic reasoning—the fact that high wages do not imply a high cost of labour, or low wages the reverse. And yet one of the most popular American arguments in favour of Protection is based on an idea which conflicts with this significant fact. Protection is advocated as necessary to assist the American manufacturer, who is paying higher wages to workmen, to compete with the European enjoying the advantage, as it is sometimes extravagantly described, of pauper labour. Mr. Schoenhof in this book brings forward a mass of evidence based on personal inquiry to substantiate the fact and confute the argument. He shows that a low cost of production may, and generally does, accompany a high rate of wages. High wages imply greater efficiency on the part of the workmen, who possess the advantage of a higher standard of comfort, with the improved education and surroundings consequent on that standard. They also stimulate to invention and to the discovery of new processes and the introduction of improved machinery. Just as the Con-

tinental competition, which presses hardest on England, is that where the conditions of industry as to hours of labour and amount of wages are most similar to those prevailing in England itself, so it is with respect to competition between Europe in general and the United States. There are certain industries, which cannot be fostered into successful existence in the States, even with the artificial aid of the tariff, because they depend on peculiar advantages of climate or on particular skill; but, in others, superior methods and a low cost of production give America an advantage, which renders this artificial assistance not merely unnecessary but positively injurious. It encourages stagnancy, and it tends to over-production. Mr. Schoenhof supports his conclusions by the examination of a number of facts, and the results of a series of detailed calculations in respect to different industries. It is difficult to judge of the precise accuracy, with which he has conducted these separate investigations, but the general drift of his inquiries points in a direction where abundant corroborating evidence has been adduced of recent years, and it is a direction as full of good omen for the future as it is undeniably important in the interpretation of the present.

Socialism and the American Spirit. By Nicholas Paine Gilman. London: Macmillan and Co., 1893.

Mr. Gilman describes his book as being not a "history or exposition of modern socialism" in general but a "discussion of the American answer to socialism." Within this limited compass he has, we think, succeeded in producing an interesting and instructive work. He betrays, it must be added, some inclination to trespass outside these narrow limits, and the subject of profit-sharing, which he has already treated in a previous volume, occupies a somewhat disproportionate share of this. He endeavours to meet the criticisms which have been recently made on that particular method of industrial reform. But this part of his book may perhaps be more properly regarded as an excursus, and the main subject is to be found in the other chapters. The general conclusion, at which Mr. Gilman arrives in these chapters, is that the American spirit is disposed to an opportunist policy. It is not inclined to reject State interference altogether, as its free schools and libraries show. It rather regards the State as an instrument to be used where political expediency dictates; but on the other hand it has no sympathy with the modern scientific socialism which would abolish private property in the means of production. The two forms of socialism, which have recently attracted the greatest notice in America are the romantic nationalism, which, arising from Mr. Bellamy's novel, *Looking Backward*, may now, so far as practical action or wide influence is concerned, be regarded, Mr. Gilman holds, as a *force négligeable*, and a Christian socialism, which differs from that of Maurice and Kingsley by embracing the tenets of Marx and the scientific socialists. Neither of the great political parties, however, is likely to encourage this species of socialism. The Republicans favour centralisation, but they consist of the large property holders.

of the country, while the Democrats, who include among their ranks the Irish immigrants, and may be said to represent the proletariat, if any such name be really applicable in America, lay stress on the rights of the separate States as opposed to the central authority. The Independents, again, who are a growing body, are hostile to any extension of the sphere of governmental action, until the Civil Service has been reformed. Mr. Gilman, therefore, thinks that America is likely to pursue the moderate and sensible course which lies between extreme individualism and comprehensive socialism, and the general direction of this course he endeavours to indicate by examining into what is really implied in the two terms so often opposed to one another.

Agrarian Tenures. By the Right Hon. G. Shaw-Lefevre, M.P. London: Cassell and Co., 1893.

Mr. Shaw-Lefevre has for long been known in agrarian matters as a prominent and indefatigable member of a school of reformers, which has of recent years been cast into the background by more advanced proposals. That school has urged the importance of free trade in land. It has pointed to the anomalous position of landed property in England, and represented the dangers to the stability of society inherent in that position. It has declared for the abolition of the law of primogeniture in cases of intestacy and the limitation of the power of settlement. It has argued in favour of improved registration of land and increased facility of transfer. Mr. Lefevre reiterates these arguments in the book now before us. Something, he shows, has been effected during the interval. Lord Cairns' Settled Land Act, and his other measures, have marked a movement in this direction, and, more recently, Lord Halsbury has endeavoured, though unsuccessfully, to improve the transfer of land. But much remains to be accomplished. The law of primogeniture is unrepealed, the power of settlement of land still needs to be assimilated to that of personalty, and registration is not yet compulsory. Other proposals have come to the front, and both political parties are now agreed on the desirability of encouraging small holdings. Mr. Shaw-Lefevre connects the older contentions with these new proposals by arguing that the tendency to aggregation of landed ownership, which he believes to be largely due to our land laws, will reassert its influence, unless the laws are altered, and will swallow up the new small properties. His own opinion with regard to these small holdings, is that only those of 5 acres or thereabouts are likely to succeed. With the number of years' purchase, which land still commands in England, no employment of State credit can bring holdings of 40 or 50 acres within the reach of the labourer, but the smaller holdings might help to keep him in the country and afford a means of rising from his present position. These holdings, however, to be of real assistance, must be near a village; and a landlord, who might readily be disposed to grant land for the larger kind of holdings, would, partly from tradition, and partly from a prudent regard to the saleable character of his estate, be disinclined to give facilities for these smaller holdings. Hence the need for compulsory powers.

Mr. Lefevre, however, is by no means an extreme reformer, though he makes no secret of his political opinions. He recognises frankly the advantages of the English system of large estates and large holdings, where they are seen at their best, though he thinks that artificial causes have tended to undue aggregation of estates and undue consolidation of holdings. He by no means favours land nationalisation, nor does he think that there are fair reasons in England for establishing the dual ownership created in Ireland by Mr. Gladstone's legislation. In England the landlord carries out the permanent improvements, and the tenant has no historical claims. In Ireland the law recognised a pre-existing custom, and was able, by a speedy process, to deal with a pressing crisis. To have accomplished a transfer of ownership to the tenant would have needed time, while imminent evils called for immediate redress. Land purchase formed, no doubt, part of the intentions of the legislature, and clauses providing for it were inserted in the Bills establishing the dual ownership. But it was only after the abortive Bill of Mr. Gladstone in 1886, and with Lord Ashbourne's and Mr. Balfour's Acts, that the scheme for land purchase was given a wide and effective extension. The low terms, on which purchase can now be effected, enable the use of State credit to place the purchasing tenant in a better position than that in which he was before; but Mr. Lefevre thinks that this must inevitably lead to a movement for compulsory universal purchase. He criticises Mr. Balfour's scheme upon this ground, and urges that in the case of this Bill, as of others, the mistake was made of not consulting the Irish representatives on an Irish matter. He also contends that the errors and omissions of previous legislation were due to the same failure to consult those representatives, and that the prophecies, which they made when the Bills were under discussion, have almost invariably come true. In Scotland, on the other hand, the opposite course was followed, and he contrasts the peaceful passage through Parliament of equally drastic, and, as it would seem, revolutionary legislation respecting the Highland crofters with the heated and embittered controversy which has always accompanied Irish agrarian reform. From the remarks we have made, the nature of his book will perhaps be evident. It is, as he styles it, a "survey of the laws and customs relating to the holding of land in England, Ireland, and Scotland, and of the reforms therein during recent years." It affords a valuable compendium of information accessible nowhere else in so compact a shape; and it is as remarkable for its general impartiality as for its concise and luminous arrangement. The Irish legislation alone, as Mr. Lefevre observes, constitutes an agrarian reform of the magnitude of that effected in France at the time of the Revolution and in Russia by the abolition of serfdom. There is, in fact, scarcely any possible direction of agrarian reform in which attempts have not been essayed during recent years in one or other of the three kingdoms, and the student will find them accurately and succinctly set forth in this important volume. The author himself, though not forgetful of political inclinations, sinks the politician for the most part in the student.

The Labor Laws of the United States. Washington: Government Printing Office, 1892.

In this report of the United States Commissioner of Labour, Mr. Carroll D. Wright, an exhaustive account is given of the various American laws relating to labour. The report comprises the laws passed in the State Legislatures before the session of 1890-91, and, in the case of the Federal Statutes, the labour legislation of this year has been included. The question, however, of inclusion and exclusion with regard to date is comparatively simple, and furnishes its own solution. But the question of determining what is, and what is not, a law affecting labour, is, as Mr. Wright remarks in his explanatory letter, far more difficult. The laws designed directly to affect the subject of labour claim a place by right in such a compilation, but there are on the statute books laws not definitely or directly intended as labour legislation, but, nevertheless, like the exemption laws, exercising an important bearing upon the condition of the labouring classes. Should they be included or excluded? Mr. Wright has followed the method of inclusion; but the laws relating to apprentices have not been incorporated in full, partly in consequence of their voluminous character, and partly because in the States, as elsewhere, they are becoming practically obsolete. And so a sample merely is furnished by a complete reproduction of such laws for the State of New York. In the case of legal holidays, again, a table showing those observed has been prepared in place of the various laws, but an exception has here been made in favour of those relating to the special holiday called "labour day." This table, and the digests of the apprentice laws, are placed in the first chapter, which is followed by a second chapter containing all the other laws, first those passed by the State Legislatures, and then the Federal Statutes. The statutes are arranged in alphabetical and the laws in chronological order.

La Sociologie Criminelle. Par Henri Ferri. Paris: Arthur Rousseau, 1893.

Professor Ferri is one of the most active members of the Italian school of criminal anthropology, and the volume before us is the author's translation into French of the third edition of a treatise, of which the first was published so long ago as 1881, and the second in 1884. As the writer points out in his preface, and his introductory chapter, the influence of the school has extended during the interval, and the number of publications, in which its principles are set forth, is now by no means inconsiderable. He furnishes at the end of his own treatise a copious bibliography. But he thinks that, despite of the repetition in his pages of what has already been said elsewhere, the edition appears at an opportune moment, after the third conference of criminal anthropology held at Brussels in 1892. At the conference assembling in Paris in 1889, the proceedings of which were noticed in a previous number of this *Journal*, a committee had been charged with the duty of conducting comparisons between 100 criminals and a like number of honest citizens, whose antecedents, and those of their

respective families, were to be accurately known. This committee had failed to accomplish its task, and the third congress, deprived of this basis of fact, had to fall back on discussions on the morbid pathology of the criminal; but it furnished an opportunity for reconciliation between the biological and the sociological inquirers. This reconciliation, Professor Ferri maintains, has always existed in the works of the Italian Positivist school, although the researches of the most eminent member of the school, M. Lombroso, have been mainly akin to the latter class of inquirers. Professor Ferri himself hopes that the issue of the new edition of his own work may go some way towards convincing the public of the necessity of the experimental methods of the school, if the science of crimes and of penalties is to recover its vitality, and of the possibility of discovering a real defence for society against crime only on the condition of the abandonment of the dogmas of the traditional theories. For the Italian school would substitute for the mitigation of punishment urged by the classical schools of Beccaria and of Howard the decrease of offences, and for the study of crime as a juridical entity the study of it as a natural and social phenomenon. It would replace the investigation of crime by the examination of criminals. The classification of criminals is one of its most essential points, and it establishes five main classes. There are those who are mentally deficient or mad, there are the criminals by birth, the criminals by habit, by occasion, or by passion. In the prosecution of the inquiry statistics are invaluable, and they point to a relation between civilisation and criminality. Professor Ferri examines the various anthropological, physical, and social factors, which determine the *quantum* of crime, and he indicates what he calls a law of criminal saturation, resting on proofs drawn from history, from statistics, and from psychology, which shows that the efficacy of punishment is less than is popularly supposed. The predisposing causes must be altered, and remedies sought in the economic, political, scientific, administrative, religious, and educational spheres, and in the influence of the family. The postulate of free will and moral responsibility assumed by the classical school is belied by psychophysiology, and is in any event disputable in theory and dangerous in practice. There is a natural and social sanction against crime, and this depends for its constituent elements on the circumstances of the act, the conditions of the agent and of the society to which he belongs. Society may, and naturally does, defend itself, and man is responsible for his actions by reason alone of his membership of society. These considerations lead Professor Ferri to examine in his fourth and concluding chapter the practical reforms which would seem to follow in natural sequence. He urges that the influence of the school has already been felt, and that the introduction into the penal codes of Holland and Italy of parallel punishments, one for the more serious and dangerous crimes, and the other consisting simply of mere detention, or, in classical phrase, *custodia honesta*, designed for minor offences of an involuntary character, is one illustration of this influence. So are the creation of asylums for the seclusion of criminals mentally affected,

in spite of their acquittal on the ground of moral responsibility, the increasing rigour of the treatment accorded, often it is true on mere empirical considerations, to the confirmed criminal, and the reaction against the extravagances of the cellular system, which he regards as an error of the nineteenth century. The two general principles which, he holds, should direct the course of reform are the maintenance of an equilibrium between individual rights and social securities, and the banishment of any delusive endeavour to appraise the amount of moral culpability. The treatment accorded should be adapted to the character of the criminal and the class to which he belongs, and the procedure of the trial should be calculated to elicit a correct decision on these important points. Such is a general outline of the tenets of the Italian school of criminal anthropology, as they are set forth in this authoritative volume, and they will reward the careful study of the social reformer. It would be premature to affirm that the school has established all its positions, but it is certain that its members are possessed of no small measure of ability, of industry, and of learning, and the book now before us affords a fresh and welcome illustration of these admirable qualities.

Le Placement des Employés, Ouvriers, et Domestiques en France. Paris: Berger-Levrault et Cie., 1893.

Mr. Schloss, in a paper read before the Royal Statistical Society in January last, alluded to this publication as one of the most admirable products of the recently established Office de Travail. It contains an account of the various employment agencies—past and present—in France, and an appendix on the provisions made in this respect in foreign countries. The main body of the report is divided into two portions—one in which the past history of the matter is traced, and the other where the actual present condition is set forth. As the director of the office, M. Jules Lax, points out, there are few, if any, questions which are more important to the world of labour, or excite more interest, sometimes rising to passion, among workmen, than the question of the means at their disposal for obtaining employment; and hence it is one of the subjects to which the office has devoted its earliest attention. But the task has been approached and carried out with a strict regard to impartiality, and a record of facts has been attempted, without passing any judgment upon the facts. The historical account is divided into two epochs—the ancient régime, and the period extending from the revolution to the present day. To ascertain the actual condition of affairs schedules of questions were addressed to all the *préfets*, the *syndicats professionnels*, and to the managers of registries of employment constituted in pursuance of a law of 1852. A special series of questions was addressed in particular to the chamber of the registries of Paris and its neighbourhood, and the municipal free registries established in the various districts of the city were invited to furnish information of their work, while, finally—and this is a feature of the French office to which Mr. Schloss called peculiar attention—a permanent officer of the department tested and supplemented these several pieces of

information by personal visits and oral inquiry. The results of the investigation are arranged in successive chapters, dealing respectively with seeking employment by person, by registry, by associations and unions, by philanthropic societies, by municipal free registries, and by societies of mutual self-help. In an appended chapter the suggestions of reform offered by the various bodies, of whom inquiry was made, are given, and the appendix contains in a summary shape the arrangements obtaining in foreign countries.

Statistical and Economical Articles in recent Periodicals.

UNITED KINGDOM—

Economic Journal. Vol. iii—

No. 9. March, 1893—

Statistics of some Midland Villages: *Joseph Ashby and Bolton King.* (Continued in the next number.)

The Survival of Domestic Industries: *E. C. K. Gonner.*

The consumption of Tea and other staple Drinks: *C. H. Denyer.*

The past action of the Indian Government with regard to Gold: *F. C. Harrison.*

The system of boarding-out Pauper children: *Florence Davenport-Hill.*

On Rent: *Alfred Marshall.*

No. 10. June, 1893—

Labour Federations: *Clem Edwards.*

State Promotion of Industrial Peace: *D. F. Schloss.*

Patriarchal versus Socialistic Remedies: *J. G. Brooks.*

Adam Smith and his Relations to Recent Economics: *L. L. Price.*

The Taxation of Ground Rents: *Prof. C. F. Bastable.*

Ricardo: Letters on the Sinking Fund; Australia under Protection (*M. Macfie*); German Clerks and Shop Assistants (*J. Bonar*); &c.

Economic Review. Vol. iii, No. 2. April, 1893—

History of English Serfdom: *W. J. Ashley.*

Co-operators and Profit-sharing: *W. E. Snell.*

The Alcohol Monopoly in Switzerland: *Joseph King.*

UNITED STATES—

Annals of the American Academy of Political and Social Science.
Vol. iii—

No. 5. March, 1893—

National and State Banks: *Horace White.*

American Banking and the Money supply of the future: *M. D. Harter.*

National and State Bank Circulation: *A. B. Hepburn.*

Banking System—old and new: *J. H. Walker.*

Basis of Security for National Bank Notes: *Henry Bacon.*

UNITED STATES—*Contd.*

Annals of the American Academy of Political and Social Science.
Vol. iii—Contd.

No. 5. March, 1893—*Contd.*

Surplus gains of Labor: *J. B. Clark.*

Supplement to Annals for March. Constitutional and Organic Laws of France, 1875-89, translated with an historical introduction by *Charles F. A. Currier.*

No. 6. May, 1893—

Relation of State to Education in England and America: *Isaac Sharpless.*

Our failures in Municipal Government: *G. Bradford.*

Cost and Expense: *Simon N. Patten.*

Home Rule for our American Cities: *E. P. Oberholtzer.*

Relation of Economic conditions to the causes of Crime: *Carroll D. Wright.*

Nature of the Federal State: *E. V. Robinson.*

Journal of Political Economy. Vol. i, No. 2. March, 1893—

Free Coinage of Silver: *Francis A. Walker.*

Railway Policy of Prussia: *Gustav Cohn.*

Discontent of the Farmer: *Edward W. Bemis.*

Crisis of 1890: *Max Wirth.*

Economics at Berlin and Vienna: *H. R. Seager.*

Political Science Quarterly. Vol. viii—

No. 1. March, 1893—

A Study in Vital Statistics: *W. F. Willcox.*

Influence of Machinery upon Employment: *John A. Hobson.*

No. 2. June, 1893—

The Monetary Conference: *E. B. Andrews.*

Progressive Taxation: *E. R. A. Seligman.*

Stock Exchange Clearing Houses: *A. D. Noyes.*

Quarterly Journal of Economics. Vol. vii, No. 3. April, 1893—

Marginal Utility and Value: *S. M. Macvane.*

The Classification of Public Revenues: *Edwin R. A. Seligman.*

The Interpretation of Ricardo: *Simon N. Patten.*

Yale Review. Vol. ii, No. 1. May, 1893—

Individualism as a Sociological Principle: *E. Benjamin Andrews.*

FRANCE—

Annales de l'Ecole Libre des Sciences Politiques. No. 2. April, 1893—

De la réduction du passif dans les déclarations de succession: *F. de Colanjon.*

Les variations du revenu et du prix des terres en France au xvii^e et au xviii^e Siècle: *D. Zolla.*

Journal des Economistes—

March, 1893—

Frédéric Bastiat et les Néo-Economistes autrichiens: *H. L. Asser.*

La Perse économique, financière, et commerciale: *Ahmed Bey.*

Contribution au mouvement féministe: *L. R.* (On the employment of women as clerks, &c., dealing especially with salaries.)

FRANCE—Contd.

Journal des Economistes—Contd.

April—

L'Intervention de l'état dans les banques d'émission en Italie : *V. Pareto.*

Une refonte de la monnaie d'or sous Louis XVI : *C. Gomel.*

Le placement des ouvriers, employés, et domestiques en France et à l'étranger : *Henri de Beaumont.*

May—

Les caisses de capitalisation ou les imprévoyants de l'avenir : *E. Rochetin.*

Journal de la Société de Statistique de Paris—

March, 1893—

L'introduction des résultats de la statistique dans l'enseignement secondaire par la géographie : *E. Levasseur.*

La statistique des actions et obligations des chemins de fer français et algériens au 31 décembre 1891 : *A. Neymarck.*
(Continued in the next number.)

Statistique des épidémies de grippe de 1890 et 1892 en France : *V. Turquan.*

Tableau du personnel médical de la France (1847-91).

April—

Division des accidents du travail en accidents individuels et accidents collectifs : *O. Keller.*

Le régime fiscal de la navigation maritime ; son influence sur les mouvements du commerce extérieur : *Beaurin-Gressier.*

May—

La Statistique du vagabondage et de la mendicité : *E. Yvernès.*

Les colonies agricoles d'Allemagne pour vagabonds et mendiants : *Thierry-Mieg.*

La mortalité, par âge, avant la naissance : *Dr. J. Bertillon.*

Le Mouton et les tarifs douaniers : *R. Lafabrière.*

La Réforme Sociale. Bulletin de la Société d'Economie Sociale et des Unions de la Paix Sociale, fondées par P. F. Le Play—

No. 58. 16th May, 1893—

La question des universités : *G. Blondel.*

Les assemblées des pays d'états sous l'ancien régime : *A. Babeau.*

Des conditions de l'harmonie dans l'industrie : *A. Gibon.*

No. 59. 1st June, 1893—

Le crédit populaire par le socialisme et par l'association libre. I. Les projets de crédit populaire de MM. V. Delahye, de Morès et Lafargue : *E. Rostand.*

Le referendum communal : *R. de la Sizeraine.*

Le métayage en Italie : *J. P. Assirelli.*

Revue d'Economie Politique—

March, 1893—

Des rapports entre Proudhon et Karl Marx : *Bourguin.*

Une question sociale et économique encore non résolue dans l'histoire de la grande Révolution française : *Dr. Boris Minzes.*

FRANCE—*Contd.**Revue d'Economie Politique—Contd.**April—*

Les rapports entre le salaire, la durée du travail et sa productivité: *L. Brentano.*

Le monopole des agents de change: *G. François.*

La séparation des pouvoirs et l'Assemblée nationale de 1789: *L. Duguit.*

Le travail aux pièces et le travail à la journée: *E. Villey.*

May—

La division du travail et la formation des classes sociales: *C. Bücher.*

Le travail en famille en Russie: *A. A. Issaïew.*

GERMANY—

Allgemeines Statistisches Archiv. II Halbband, 1891-92—

Ueber die Verteilung der beiden Geschlechter auf der Erde: *Karl Bücher.*

Wissenschaftliche Stellung und Grenzen der Demologie: *J. Körösi.*

Anthropometrische Messungen und deren praktischer Wert: *Dr. Uhlitzsch.*

Ueber die Vorteile der Berechnung nach "perzentilen Graden": *Dr. A. Geissler.*

Zur Publikations-Technik: *Dr. Georg v. Mayr.*

Die Wohnungsverhältnisse der ärmeren Klassen in Berlin: *Dr. G. Berthold.*

Zur Statistik der Mehrgeburten: *H. Westergaard.*

Russlands Bedeutung für den Weltgetreidemarkt (*continued*): *Dr. O. Mertens.*

Die Intensität grossstädtischer Menschenanhäufungen: *Dr. E. Hasse.*

Statistische Aemter deutscher Städte. Personalien, Organisations- und Etatsverhältnisse derselben.

Archiv für soziale Gesetzgebung und Statistik. Band vi, Heft 1, 1893—

Die ortsüblichen Tagelöhne gewöhnlicher Tagearbeiter im Deutschen Reiche: *Dr. E. Lange.*

Ein Experiment mit dem Achtstundentage: *Dr. O. Pringsheim.*

Die neue Arbeiterschutzgesetzgebung in Frankreich: *R. Jay.*

Zwei Haushaltsbudgets über einen zwanzigjährigen Zeitraum: *Dr. E. Hofmann.*

Jahrbücher für Nationalökonomie und Statistik. Dritte Folge. Band v, Heft 3, 1893—

Unter dem Zunftzwange in Preussen während des 18 Jahrhunderts: *K. v. Rohrscheidt. (Continued in next number.)*

"Interstate-Commerce" Gesetz in den Vereinigten Staaten: *J. A. Hill.*

Das Pfandvorrecht der Bauhandwerker: *P. Oertmann.*

Die französische Gesetzgebung betreffend die Zuckersteuer, den Zoll und die Finanzen, 1881-91: *A. Liesse.*

GERMANY—Contd.

Jahrbücher für Nationalökonomie und Statistik. Dritte Folge.
Band v, Heft 3, 1893—Contd.

Die japanischen Reiskörner, speziell die in Tokyo: *Wermcke.*
Miet- und Gebäudepreise in Frankreich: *L. S. Rowe.*

Heft 4—

Die wahre Beschaffenheit der Versicherung in der Entstehungszeit des Versicherungswesens: *A. Schaub.*

Die zweite Lesung des Entwurfes eines Bürgerlichen Gesetzbuches für das Deutsche Reich: *Greiff.*

Das französische Arbeiterschutzgesetz vom 2 Nov., 1892: *P. Müllendorff.*

Die Meistbegünstigungsklausel in der modernen Handelspolitik: *J. Grunzel.*

Bürgerliche Socialpolitiker in England: *G. Hoffmann.*

Vierteljahrsschrift für Volkswirtschaft, Politik, &c. Band ii, 1893—
Zur Geschichte des monarchischen Prinzips in der neueren Zeit: *J. von Held.*

Die Lebensversicherung im Dienste des Bodenkredits: *M. Havas.*

Die Währungsfrage: *J. Lehr.*

Der deutsch-russische Handelsvertrag: *N. Syrkin.*

Moriz Block's neuestes "Europa": *F. C. Philippson.*

Vierteljahrsschefte zur Statistik des Deutschen Reichs. Heft 2, 1893—
Die Bevölkerung des Deutschen Reichs nach dem Geburtsort am 1 Dez., 1890.

Produktion der Bergwerke, Salinen und Hütten, 1892.

Verkehr auf den deutschen Wasserstrassen, 1872 bis 1891.

Einfuhr, Ausfuhr, und Durchfuhr, 1892.

Branntwein- Brennerei und- Besteuerung, 1891-92.

Zeitschrift für Litteratur und Geschichte der Staatswissenschaften.
Band i, Heft 1, 1893—

Beiträge zur Geschichte des Sozialismus und des Kommunismus: *H. Dietzel.*

Ludwig XVI und das physiokratische System: *A. Oncken.*

Ein neues System der Sozialökonomie: *U. Rabbeno.* (Continued in next number.)

Heft 2 und 3—

Zur Litteratur der Lehre vom Staatskredit: *R. Grätzer.*

Dogmengeschichtliches zur Frage über den Einfluss der Getreidepreise auf die Arbeitslöhne: *B. Földes.*

Heft 4—

Auf dem Wege zur Gewerbefreiheit in Preussen: *K. v. Rohrscheidt.*

Studien über die neuesten Untersuchungen auf dem Gebiete der politischen Oekonomie in Spanien: *M. Salva.*

AUSTRIA—

Statistische Monatschrift—

February, 1893—

Die Einwanderung aus den podolischen Bezirken nach Russland im Jahre 1892: *T. Pilat.*

AUSTRIA—*Contd.**Statistische Monatschrift—Contd.**February, 1893—Contd.*

Die Sterblichkeit in den grösseren Städten Oesterreichs im Jahre 1892: *Bratassevie.*

March—

Der Zug nach der Stadt: *H. Rauchberg.*

April—

Ueber Einrichtungen für Arbeitsvermittlung: *F. Probst.*

Die sociale Gliederung der Wohnparteien: *H. Rauchberg.*

Die Häufigkeit der Eheschliessungen und der Geburten im Lichte der Volkszählung: *H. Rauchberg.*

Die Production von Cocons, Honig und Wachs in die im Reichsrathe vertretenen Königreichen und Ländern in 1885-92.

Statistik des österreichischen Tabakmonopoles während 1871-91: *Bratassevie.*

ITALY—

*Giornale degli Economisti—**March, 1893—*

La Campagna romana e il suo avvenire economico e sociale: *G. Valenti.* (*Continued in next number.*)

La pressione tributaria dell' imposta e del prestito: *A. De Viti de Marco.*

April—

L'ordinamento delle Banche d'emissione in Italia.

L. A. Muratori come economista: *E. Masè-Dari.*

May—

I Monti di pietà in Italia: *P. Sitta.*

Le basi economiche del diritto: *A. Loria.*

Ferrovie economiche: *E. Olivieri.*

SWITZERLAND—

*Journal de Statistique Suisse. 1893—**Livr. 1—*

Die Geschichte der Fabrikgesetzgebung im Kanton Thurgau bis zum Jahre 1877: *E. Hoffmann.*

La statistique internationale des œuvres littéraires: *E. Röthlisberger.*

Übersicht der Geldbeträge, welche im Jahre 1891 den Auswanderungsagenten in der Schweiz übergeben worden sind und den Auswanderern am Bestimmungsorte auszubahlen waren: *J. Dreifuss.*

Livr. 2—

Die Lehrpläne und Maturitätsprüfungen der Gymnasien der Schweiz. Materialien und Vorschläge: *G. Finsler.*

IX.—*Additions to the Library.*

Additions to the Library during the Quarter ended 15th June, 1893, arranged alphabetically under the following heads:—(a) Foreign Countries; (b) India and Colonial Possessions; (c) United Kingdom and its Divisions; (d) Authors, &c.; (e) Societies, &c. (British); (f) Periodicals, &c. (British).

Donations.	By whom Presented.
(a) Foreign Countries.	
Argentine Republic—	
Comercio Exterior. Datos trimestrales del, No. 76. 1892. 8vo.	The Director-General of Statistics
Estudio Estadístico del Presupuesto nacional seguido de un proyecto de reforma del mismo y de otro de ley de empleos civiles. 8vo. 1893	
Higiene Publica. Anales de. (Current monthly numbers) BUENOS AYRES (City). Bulletin mensuel de Statistique municipale. (Current numbers)	Dr. E. R. Coni The Municipal Statistical Bureau
Instituto Geografico Argentino. Boletin del. Tomo xiii. Cuadernos 7—12. 8vo. 1892-93	The Institute
Austria-Hungary—	
Ackerbau- Ministeriums. Statistisches Jahrbuch des k.k. Production aus der Seiden- und Bienenzucht in 1885 bis 1891 . . . 8vo.	The Ministry of Agriculture
Handel des Zollgebiets. Statistische Uebersichten betreffend den auswärtigen. (Current monthly numbers)	The Statistical Department, Ministry of Commerce
Civilrechtspflege. Ergebnisse der, im Jahre 1889. Fol. Concursverfahrens. Die Ergebnisse des, im Jahre 1888. Fol.	The Central Statistical Commission
Oesterreichische Staatshaushalt in den Jahren 1889 und 1890. Fol.	
Oesterreichisches Statistisches Handbuch für 1892. 8vo.	
Statistische Monatschrift. (Current numbers)	
Volkszählung. Die Ergebnisse der, vom 31 Dec., 1890. Heft 2. Die Bevölkerung nach Heimatsberechtigung und Gebürtigkeit. Heft 4. Die Wohnungsverhältnisse in den grösseren Städten und ihren Vororten. Diagram-maps, fol.	The Royal Hungarian Statistical Bureau
HUNGARY. Volkszählung. Ergebnisse der in den Ländern der Ungarischen Krone am anfang des Jahres 1891 durchgeführten, Theil 1. Allgemeine Demographie. Diagram-maps, fol.	
PRAGUE. Bulletin hebdomadaire de la ville de Prague et des communes-faubourgs. (Current numbers)	The Municipal Statistical Bureau
Belgium—	
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BIDDLE (DANIEL). The Infectious Diseases (Notification) Act of 1889, and its effect in the large Towns of England. 6 pp., fol. Kingston-on-Thames, 1893.....	The Author
BOSCO (AUGUSTO). Lo Studio della Delinquenza e la classificazione dei reati nella Statistica penale. 50 pp., la. 8vo. Roma, 1892	„
BOURNE'S Handy Assurance Manual, 1893. 4th year of Publication. Edited by H. S. Carpenter. 8vo.	The Editor
COOPER (JOSEPH). Tabular Guides and Graduated Tables to Ordinary and Industrial Life Assurance. Folded slips. 1893.....	The Author
CUBAS (ANTOINE GARCIA). Etude géographique, Statistique, descriptive et historique des Etats Unis Mexicains. xiv + 415 pp., 8vo. Mexico, 1889.....	D. O. Croal, Esq.
DANSON (J. T.). Our next War. A word on War Premiums; and on the Underwriting of 1805 and 1808. 62 pp., 8vo. 1893	The Author
Dictionary of Political Economy, edited by R. H. Inglis Palgrave, F.R.S. Part 5. De Cardenas—Drawing. 8vo. 1893	The Editor
DOUGLAS (JOHN M.). Gold and Silver Money, a vital British home question . . . Loss and danger in present system, proposed good and bad remedies, with tables of average prices of commodities and silver from 1846 till 1892. Second edition. 33 pp., 8vo. 1892.....	The Author
FENTON (JAMES J.). An Australian Federal Debt. 14 pp., 8vo. Hobart, 1892	„
GILMAN (NICHOLAS PAINE). Socialism and the American Spirit. x + 376 pp., 8vo. 1893	Messrs. Macmillan and Co.
GORDON (JOSEPH C.). Notes and Observations upon the Education of the Deaf, with a revised Index to Education of Deaf Children. cx + 90 pp., 8vo. Washington, 1892	The Volta Bureau
<i>Guyot (Yves)—</i>	
L'Impôt sur les opérations de Bourse. 16 pp., 16mo. Paris, 1893	The Author
Les Préjugés économiques. 30 pp., 8vo. Paris, 1893	

Donations—Contd.

Donations.	By whom Presented.
(d) Authors, &c.—Contd.	
<i>Guyot Yves—Contd.</i>	
La Question des Patentes et des Grands Magasins. 32 pp., 16mo. Paris, 1893	The Author
HADFIELD (R. A.) and (H. DE B.) GIBBINS. A shorter Working Day. viii + 184 pp., 12mo. 1892	
<i>Hayter (H. H.)—</i>	
Concentration of Population in Australian Capital Cities. 8 pp., 8vo. Hobart, 1892	The Author
Disturbance of the Population Estimates by Defective Records. 7 pp., 8vo. Hobart, 1892	
JACCOTTEY (PAUL) et (M.) MABYRE. Carte Générale des Lignes Télégraphiques Internationales. Sheet. Paris [1893]	The Publishers
JURASCHEK (D. FRANZ VON). Übersichten der Welt-wirtschaft. Lieferung 9 und 10. Jahrgang 1885-89. 12mo. Berlin, 1893	The Author
LEFEVRE (RT. HON. G. SHAW, M.P.). Agrarian Tenures. A Survey of the Laws and Customs relating to the holding of Land in England, Ireland, and Scotland, and of the reforms therein during recent years. viii + 313 pp., 8vo. 1893	"
LEVASSEUR (EMILE). Résumé historique de l'enseignement de l'économie politique et de la Statistique en France de 1882 à 1892. 61 pp., 8vo. Paris, 1893	
PAGE (EDWARD D.). The Woollen Tariff. 11 pp., 8vo. Boston, 1893	"
PEACE (WALTER). Notes on Natal. 14 pp., 8vo. 1893....	"
Plea, a, for Liberty. An argument against Socialism and Socialistic Legislation. Popular edition. xi + 326 pp., 8vo. 1892	—
RAFFALOVICH (ARTHUR). Le Marché financier en 1892, précédé d'une préface sur le rôle de la spéculation. xx + 176 pp., 8vo. Paris, 1893	The Author
SELIGMAN (EDWIN R. A.). The Classification of Public Revenues. 36 pp., 8vo. 1893	"
Statesman's Year Book for 1893. Edited by J. Scott Keltie. Maps. 8vo.	Messrs. Macmillan and Co.
(e) Societies, &c. (British).*	
Association of Chambers of Commerce. Report and Resolutions adopted at the Annual Meeting held in March, 1893. 8vo.	C. M. Kennedy, Esq., C.B.
British Association. Report of the 62nd Meeting, held at Edinburgh in August, 1892. 8vo. Diagrams. 1893	The Association
British Economic Association. The Economic Journal. March, 1893. Vol. iii, No. 9	
Economic Review. Vol. iii, No. 2. 8vo. 1893	The Publishers
East India Association. Journal. (Current numbers)	The Association
Friendly Society of Ironfounders. 83rd Annual Report, for 1892, and current monthly reports. 8vo.	Sir R. W. Rawson, K.C.M.G., C.B.
Imperial Federation League. Imperial Federation, the [monthly] Journal of the League. (Current numbers)	The League

* Foreign and Colonial Societies will be found under the various Countries or Possessions to which they belong.

Donations—Contd.

Donations.	By whom Presented.	
(e) Societies, &c. (British)—Contd.		
Institute of Actuaries. Journal. Vol. xxx. Part 5. April, 1893 (contains two Essays on Enfranchise- ments of Leaseholds and the Taxation of Ground Rents, &c.)	The Institute	
Institute of Bankers. Journal. (Current numbers)		
Institute of Chemistry. Register of Fellows, &c., for year 1893-94. 8vo.		
Institute of Civil Engineers. Minutes of Proceedings. Vol. cxi. 1892-93. Plates. 8vo.	The Institution	
Institution of Mechanical Engineers. Proceedings, No. 4, 1892. Plates. 8vo.		
London Chamber of Commerce. Journal. (Current numbers)	The Chamber of Commerce	
Manchester Literary and Philosophical Society. Memoirs and Proceedings. Fourth series. Vol. vii, No. 1. 8vo. 1893		
Peabody Donation Fund. 28th Annual Report of the Trustees for 1892. Sheet	J. Crouch, Esq.	
Royal Agricultural Society, Journal. Third Series. Vol. iv, part 1. 1893		
Royal Asiatic Society. Journal. April, 1893. 8vo.	The Society	
Royal Geographical Society. Geographical Journal. (Current numbers)		
Royal Institution of Great Britain. Proceedings. Vol. xiii, part 3. 8vo. 1893. Plates	The Institution	
Royal National Life Boat Institution. Annual Report, Lists of Committee, Officers, &c. 1893		
Royal United Service Institution. Journal. (Current monthly numbers)	The Society	
Royal Society. Proceedings. (Current numbers)		
Society of Arts. Journal. (Current numbers)	The Institution	
Surveyors' Institution. Transactions. (Current num- bers)		
(f) Periodicals, &c. (British).*		
Accountant, The	The Editor	
Athenæum, The		
Bankers' Magazine, The	The Editor	
British Trade Journal, The		
Building Societies and Land Com- panies' Gazette, The	The Editor	
Commercial World, The		
Economist, The	The Editor	
Fireman, The		
Insurance Post, The	The Editor	
„ Record, The		
Invention	The Editor	
Investors' Monthly Manual, The		
Iron and Coal Trades' Review, The	The Editor	
Machinery Market, The		
Nature	The Editor	

* Foreign and Colonial Periodicals will be found under the various Countries or Colonies in which they are issued.

Donations—Contd.

Donations.	By whom Presented.
(f) Periodicals, &c. (British)— <i>Contd.</i>	
Policy-Holder, The Current numbers	The Editor
Review, The "	"
Sanitary Record, The "	"
Shipping World, The "	"
Statist, The "	"

*Purchases.***Authors, &c.—**

- Ashley (W. J.). An Introduction to English Economic History and Theory. Part 1. The Middle Ages. Second edition. Part 2. The end of the Middle Ages. 2 vols. 8vo. 1892-93.
- Bertillon (Alphonse). Identification Anthropométrique. Instructions signalétiques. Nouvelle édition. 2 vols. Plates. 8vo. Melun, 1893.
- Bushill (T. W.). Profit Sharing and the Labour Question. With an Introduction by Sedley Taylor. 262 pp., 8vo. 1893.
- Caird (James). The Landed Interest and the Supply of Food. Fourth edition. xvi + 184 pp., 8vo. 1880.
- Cunningham (W., D.D.). The Growth of English Industry and Commerce in Modern Times. xvi + 771 pp., 8vo. Cambridge, 1892.
- De Quincey (Thomas). The Logic of Political Economy. xii + 260 pp., 8vo. 1844.
- Garnier (Russell M.). History of the English Landed Interest; its Customs, Laws, and Agriculture. xviii + 406 pp., 8vo. 1892.
- Johnson (James). The Gothenburg system of Public-House Licensing; what it is, and how it works. With preface by the Rev. H. R. Wakefield, and an Appendix containing the Bishop of Chester's Licensing Proposals. Second edition. 95 pp., 8vo. 1893.
- Reclus (Elisée). Nouvelle Géographie Universelle. Vol. xviii. Amérique du Sud, les Régions Andines. 1893.
- Redgrave (Alexander) and (Jasper A.) Redgrave. The Factory and Workshop Acts, 1878 to 1891, with introduction, copious notes, and an elaborate index. Fifth edition. xxxvii + 298 pp., 8vo. 1893.
- Richards (Westley). Agricultural Distress. The Cattle Trade and Farmer's Accounts. Second edition. 56 pp., 8vo. 1893.
- Shadwell (John Lancelot). A System of Political Economy. x + 625 + xii pp., 8vo. 1877.
- Wagner (Hermann) and (Alexander) Supan. Die Bevölkerung der Erde. IX. vi + 130 pp., 8vo. Gotha, 1893.
- Whitman (Sidney)—*
The Realm of the Hapsburgs. viii + 310 pp., 8vo. 1893.
Imperial Germany; a critical study of fact and character. 304 pp., 8vo. 1891.
- Wolff (Henry W.). People's Banks; a record of Social and Economic Success. xvi + 261 pp., 8vo. 1893.

Periodicals, &c.—

- Annual Register for 1892.
- Australian Handbook for 1893.
- Palmer's Index to the Times for the first quarter of 1893.
- Publishers' Circular. (Current weekly numbers.)
- Documents statistiques [mensuels] sur le Commerce de la France. (Current numbers.)
- Vierteljahrschrift für Volkswirthschaft, &c. Band ii, Hälfte 1 und 2. 1893.

Parliamentary Papers—

- Building Societies (348), 1892.
 - Charity Commission, 40th Report, 1893.
 - Civil Employment of Soldiers [6954], 1893.
 - Ecclesiastical Commission, 45th Report, 1893.
 - Education, Scotland [6988], 1893.
 - Egypt. Finances and General Condition [6957], 1893.
 - International Monetary Conference, Brussels [6885], 1893.
 - Life Assurance Companies (119), 1893.
 - Local Taxation (168), 1893.
 - Mining Royalties. Fourth and Final Reports of Royal Commission on, 1893.
 - Mines. Statistical Summaries of Reports of Inspectors of, for 1893.
 - Trustee Savings Banks (40), 1893.
 - Winding up of Companies. Report on (159), 1893.
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JOURNAL
OF THE ROYAL STATISTICAL SOCIETY,
SEPTEMBER, 1893.

REPORT of the COUNCIL for the FINANCIAL YEAR ended 31st December, 1892, and for the SESSIONAL YEAR ending 27th June, 1893, presented at the FIFTY-NINTH ANNUAL GENERAL MEETING of the ROYAL STATISTICAL SOCIETY, held at the Society's Rooms, 9, Adelphi Terrace, Strand, London, on the 27th of June, 1893.

THE Council have the honour to submit their Fifty-ninth Annual Report.

The roll of Fellows on the 31st December last as compared with the average of the previous ten years was as follows—

Particulars.	1892.	Average for the previous Ten Years.
Number of Fellows on 31st December	994	960
Life Members included in the above	171	158
Number lost by death, withdrawal, or default	70	62
New Fellows elected	45	83

Since the 1st January last, 15 new Fellows were elected, and the number at present on the list is 981.

The death roll of Fellows during the past year has happily been small, but the list includes the name of the Right Honourable the Earl of Derby, K.G., who was President of the Society in 1857-59, and who had been a member since 1855.

Deaths of Fellows from June, 1892—June, 1893.

	Date of Election.
Abrahams, Israel	1876
Ainslie, William George, M.P.	1886
c p (1) Anderson, Sir James, F.R.G.S.	1871

c Indicates those who had served on the Council.
p Indicates those who had contributed Papers, with the number

Deaths during the past Year—Contd.

	Date of Election.
Castle, Robert	1880
<i>c d</i> Derby, The Right Hon. the Earl of, K.G., } F.R.S.	1855
<i>d</i> Findlay, Sir George	1880
<i>c d</i> Freeland, Humphrey William, J.P.	1844
Grant, Thomas Rennie	1885
Gray, Thomas	1847
Herbage, William	1877
<i>c</i> Pinckard, George Henry, J.P.	1838
Smith, E. Woodley	1883
Stainton, Henry Tibbats, F.R.S.	1856
Summers, William, M.P.	1880

Deaths of Honorary Fellows.

<i>d</i> Brachelli, Dr. Hugo Ritter von	1877
<i>d</i> Flechia, Giovanni	1854
<i>p</i> (1) Parieu, M. L. P. F. Esquiron de.....	1860

c Indicates those who had served on the Council.

d Indicates those who had been Donors to the Library.

p Indicates those who had contributed Papers, with the number.

The financial condition of the Society continues to be satisfactory, as exhibited in the accompanying table, in which the particulars are contained for the twenty-five years 1868-92.

The Society re-assembled in November, and the papers read and the members elected at each of the monthly meetings have been as follows:—

SESSION 1892-93.

First Ordinary Meeting, Tuesday, 15th November, 1892.

The President, CHARLES BOOTH, ESQ., in the Chair.

The following were elected Fellows:—

W. M. Acworth, M.A.	Herbert John Haddan.
Jesse Argyle.	James Hole.
William Birkmyre, M.P.	Sir John T. D. Llewelyn, Bart., C.C.
Lord Charles Frederick B. Bruce.	Thomas Lough, M.P.
James Chatham, F.I.A., F.F.A.	Alfred Milner.
Miss Clara Elizabeth Collet, M.A.	Dadabhai Naoroji, M.P.
Charles Alfred Cripps, Q.C.	Charles Edmonstone Ross.
William Nimmo Dewar.	Captain John Sinclair, M.P.
Henry de Smidt.	John Alfred Spender, M.A.
Lieut.-Col. R. Purefoy Fitzgerald, J.P.	Edgar Alfred Tyler.
Alfred Goodwin, M.A.	Benjamin A. Whitelegge, M.D.

The President delivered his Inaugural Address.

Year.	Number of Fellows on 31st December.	Number of Compounds included therein.	Losses during Year by Deaths, &c.	Gains by Election, &c., during Year.	Ordinary Income.	Ordinary Expenditure.	Income from all Sources.	Income from			Total Expenditure.	Expenditure on		Amount Invested on 31st December.	Year.
								Annual Subscriptions.	Compositions.	Journal Sales.		Journal.	Library.		
1868....	387	62	18	34	£ 796	£ 726	£ 796	£ 622	£ 21	£ 109	£ 726	£ 293	£ 17	£ 1,100	1868
'69....	400	62	24	37	810	733	810	617	42	103	826	279	7	1,200	'69
1870....	403	62	22	25	852	839	852	670	21	112	839	314	15	1,200	1870
'71....	431	63	17	45	880	793	880	657	63	115	804	317	15	1,200	'71
'72....	454	72	17	40	1,112	805	1,112	739	189	141	991 ^a	318	5	1,400	'72
'73....	530	75	34	110	1,231	1,026	1,248	832	189	167	1,284 ^a	384	17	1,600	'73
'74....	588	84	35	93	1,377	1,479	1,377	918	252	140	1,491	461	40	1,600	'74
'75....	607	87	31	50	1,231	1,173	1,231	928	105	133	1,733	449	18	1,271	'75
'76....	611	90	46	50	1,438	1,320	1,438	1,054	168	159	1,340	524	75	1,271	'76
'77....	683	101	40	112	1,597	1,285	1,597	1,117	252	151	1,476 ^a	474	49	1,471	'77
'78....	746	115	45	108	1,732	1,345	1,732	1,197	294	169	1,849 ^a	580	32	2,000	'78
'79....	783	119	52	89	1,698	1,427	1,698	1,300	126	176	1,808 ^a	671	34	2,400	'79
1880....	808	129	49	74	1,902	1,517	1,902	1,317	273	202	1,806 ^a	573	80	2,700	1880
'81....	807	130	45	44	1,649	1,400	1,649	1,306	84	145	1,697 ^a	669	37	3,000	'81
'82....	786	135	63	42	1,838	1,580	1,838	1,291	189	227	1,782 ^a	553	60	3,200	'82
'83....	860	139	41	115	1,774	1,635	1,778	1,361	126	150	1,943 ^a	585	49	3,500	'83
'84....	909	150	57	106	2,055	1,585	3,146 ^b	1,447	294	207	3,088 ^c	645	38	2,500	'84
'85....	928	158	55	74	1,812	1,832	2,062 ^d	1,462	63	188	2,070 ^c	625	27	2,500	'85
'86....	943	156	70	85	2,086	1,842	2,086	1,583	231	180	2,106 ^e	735	32	2,500	'86
'87....	977	160	59	93	2,029	1,745	2,029	1,621	126	188	2,135 ^f	609	87	2,500	'87
'88....	1,059	172	58	140	2,292	1,939	2,292	1,686	334	171	2,003	711	58	2,500	'88
'89....	1,060	175	69	70	2,115	1,904	2,115	1,678	126	229	2,060 ^g	623	146	2,500	'89
1890....	1,063	177	65	68	2,097	1,707	2,097	1,764	84	155	2,096 ^a	567	68	2,900	1890
'91....	1,019	172	80	36	1,976	1,744	2,076 ^h	1,707	42	146	1,957 ⁱ	582	172	2,900	'91
'92....	994	171	70	45	1,980	1,859	1,980	1,634	84	158	1,883 ^j	539	94	2,900	'92

^a Includes purchase of Government stock.^d Includes Dr. Guy's legacy of 250*l*.^e Includes cost of part iv of Index to Journal.^f Includes outlay for Guy Medal and for binding the "Times."^b Includes sale of 1,000*l*. stock.^c Includes cost of Jubilee Volume.^d Includes Mrs. Lovegrove's legacy of 100*l*.^e Includes outlay for drainage repairs.^f Includes expense of moving to new premises.^g Includes cost of Catalogue and Index, and of Charter.^h Includes Mrs. Lovegrove's legacy of 100*l*.ⁱ Includes outlay for drainage repairs.

A cordial vote of thanks to the President for his Address was moved by Dr. F. J. Mouat, seconded by Mr. Rowland Hamilton, and carried unanimously.

Second Ordinary Meeting, Tuesday, 20th December, 1892.

The President in the Chair.

The following were elected Fellows:—

Robert Hope Atkinson.	Herbert Samuel Leon, M.P.
Charles J. Byworth.	The Right Hon. the Earl of Onslow,
George Fisher.	G.C.M.G.
Henry Higgs, LL.B.	Ernest Frank Scofield, B.A.

Mr. J. A. Baines read a Paper on “Distribution and Movement of Population in India.”

In the discussion which followed, the undermentioned took part:—Sir W. C. Plowden, Sir C. Bernard, Mr. F. Hendriks, Mr. N. A. Humphreys, Mr. R. Price-Williams, Mr. Rowland Hamilton, Dr. F. J. Mouat, Sir Juland Danvers, Mr. Charles Booth, and Mr. Baines in reply.

Third Ordinary Meeting, Tuesday, 17th January, 1893.

The President in the Chair.

The following was elected a Fellow:—

Harrison Davis.

Mr. D. F. Schloss read a Paper on “The Reorganisation of our Labour Department.”

In the discussion which followed, the undermentioned took part:—The President (Mr. Charles Booth), Mr. George Howell, M.P., Lord Thring, Mr. F. Debenham, Mr. W. Storr, Mr. W. M. Acworth, and Mr. Schloss in reply.

Fourth Ordinary Meeting, Tuesday, 21st February, 1893.

Mr. ROWLAND HAMILTON, Vice-President, in the Chair.

The following were elected Fellows:—

Henry S. Carpenter.	Stephen N. Fox.
James M. Stuart Smith.	

The following were elected Honorary Fellows of the Society:—

- Dr. Joseph de Jekelfalussy (Austria-Hungary),
Chief of the Royal Hungarian Statistical Bureau, Budapest.
- Dr. Franz Ritter von Juraschek (Austria-Hungary),
Member and Secretary of the I. and R. Central Statistical Commission, Vienna.
- Herr Joseph Körösi (Austria-Hungary),
Director of the Statistical Bureau of Budapest.
- Dr. von Scheel (Germany),
Director of the Imperial Statistical Bureau, Berlin.
- Dr. W. Verkerk Pistorius (Netherlands),
Director-General of Direct Taxation, Customs, and Excise, The Hague.
- Carroll Davidson Wright (United States),
Commissioner of the U. S. Department of Labour, Washington.
- T. A. Coghlan (New South Wales),
Government Statistician of New South Wales, Sydney.

Dr. Francis Warner read a Paper on “Results of an Inquiry as to the Physical and Mental Condition of Fifty Thousand Children seen in One Hundred and Six Schools.”

In the discussion that followed, the undermentioned took part:—Mr. C. S. Loch, Mr. J. W. Palmer, Mr. D. Chadwick, Rev. W. D. Morrison, Mr. J. G. Rhodes, Mr. C. M. Kennedy, Mr. F. Hendriks, Mr. R. H. Inglis Palgrave, Mr. R. Hamilton (Chairman), and Dr. Warner in reply.

Fifth Ordinary Meeting, Tuesday, 21st March, 1893.

Mr. JOHN BIDDULPH MARTIN, Honorary Secretary, in the Chair.

The following were elected Fellows:—

John Fenwick Fenwick. | Dr. Samuel A. K. Strahan.

Mr. Stephen Bourne read a Paper on “The Progress of the External Trade of the United Kingdom in recent Years.”

In the discussion which followed, the undermentioned took part:—Mr. John B. Martin (Chairman), Mr. A. S. Harvey, Mr. H. Moncreiff Paul, Mr. John Glover, Mr. Deacon, Mr. A. E. Bateman, Mr. F. Hendriks, Mr. G. Samuel, and Mr. S. Bourne in reply.

Sixth Ordinary Meeting, Tuesday, 18th April, 1893.

Mr. ROWLAND HAMILTON, Vice-President, in the Chair.

The following were elected Fellows:—

Herbert W. Anderson. | Thomas Harrap.
William R. Taylor Carr. | Frederick W. Mackinney.

Mr. Augustus Sauerbeck read a Paper on “Prices of Commodities during the last Seven Years.”

In the discussion which followed, the undermentioned took

part:—Professor F. Y. Edgeworth, Mr. H. Moncreiff Paul, Mr. John Dun, Mr. E. L. Walford, Mr. Stephen Bourne, Sir Rawson W. Rawson, Mr. G. Samuel, Mr. J. H. Sherwin, Mr. A. K. Connell, the Chairman, and Mr. Sauerbeck in reply.

Seventh Ordinary Meeting, Tuesday, 16th May, 1893.

The President in the Chair.

The following were elected Fellows:—

J. W. Bray Brown.	|	Alfred W. Flux, M.A.
		William C. Ward.

Mr. Henry Higgs read a Paper on "Workmen's Budgets."

In the discussion which followed, the undermentioned took part:—The President (Mr. Charles Booth), Professor A. Marshall, M. Paul de Rousier, Mr. Benjamin Jones, Mr. John Burnett, Mr. Jesse Argyle, Mr. J. Graham Brooks, Mr. Ernest Aves, Mr. G. H. Putnam, and Mr. Higgs in reply.

Eighth Ordinary Meeting, Tuesday, 20th June, 1893.

The President in the Chair.

The following were elected Fellows:—

David Fortune.		Thornhill Weedon.
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Dr. George B. Longstaff read a Paper on "Rural Depopulation."

In the discussion which followed, the undermentioned took part:—Mr. C. M. Kennedy, Mr. N. A. Humphreys, Mr. John Walter, Mr. Clare S. Read, Major P. G. Craigie, Mr. R. Price-Williams, Mr. C. S. Loch, Mr. F. Hendriks, Mr. S. B. L. Druce, Sir Rawson W. Rawson, Mr. Baldwyn Fleming, and Dr. Longstaff in reply.

The number of Fellows has slightly declined during the year 1892. As a result the income has fallen below the amount received during the past few years; the Council, however, has been able, without trenching upon the capital of the Society, to defray the expenses of an extraordinary nature, amounting to over 100*l.*, arising out of the necessity for renewing the drainage of the premises, reference to which was made in their report last year. As far as can be foreseen, no heavy expenses are likely to arise during the present year, so that the current income is estimated to meet the ordinary requirements of the Society. In view of the fact that the constantly increasing Library will, in all probability, require in the future a larger sum to maintain it in proper condition, the Council would specially invite individual Fellows to help in maintaining the numbers of the Society.

The Institute of Chemistry have now ceased, since Lady Day, to be the Society's tenants. The Council are glad to report that the room has since temporarily been sub-let to the President, Mr. Charles Booth.

Under the conditions in the regulations laid down last year for the award of the Guy Medal, the Council have awarded a silver Guy Medal to Mr. John Glover, for his paper, read in March, 1892, on "Tonnage Statistics during the Decade 1880-90," taking this opportunity of recognising the valuable series of papers on this subject presented by him to the Society, extending over a continuous period of four decades.

In accordance with the resolution passed at the last Annual General Meeting, a Deed of Trust has been drawn up, appointing Mr. John B. Martin a Trustee of the Society's Funds, in place of the late Sir James Caird. In accordance with the same resolution, also, the leasehold premises, formerly in the names of the Trustees, have been conveyed to the Society. The Common Seal has been affixed to the necessary documents.

The meeting of the British Association last year was held at Edinburgh, Section F being under the presidency of the Hon. Sir Charles W. Fremantle. Papers were read by the following Fellows of the Society:—Mr. W. M. Acworth, Mr. C. S. Loch, Mr. L. L. Price, and Mr. D. F. Schloss. At the ensuing meeting, to be held at Nottingham in September, Professor J. S. Nicholson, F.S.S., will preside over Section F.

The International Statistical Institute will be held this year at Chicago, under the presidency of General Francis A. Walker, President of the American Statistical Association, and an Honorary Fellow of this Society.

In connection with the Chicago Exhibition, it is proposed to hold several International Conferences on various subjects. The Society having been invited to appoint delegates to these Conferences, the Council have nominated Mr. John B. Martin, Mr. A. E. Bateman, Major P. G. Craigie, and Mr. F. Hendriks to represent them at any of these conferences dealing with economic or similar questions which may be held during their stay in Chicago.

The cordial thanks of the Council have been tendered on behalf of the Society to the Auditors, for their honorary services in auditing the Treasurer's account for the past year.

Permission to hold the Ordinary Meetings of the Society in the Theatre of the Museum of Practical Geology, in Jermyn Street, has been continued through the courtesy of the Education Department, and the Council have again conveyed to the Lords of the

Committee of Council on Education their thanks for the accommodation thus afforded.

The following list of Fellows proposed as President, Council, and Officers of the Society for the Session 1893-94 is submitted for the consideration of the meeting:—

COUNCIL AND OFFICERS FOR 1893-94.

PRESIDENT.

CHARLES BOOTH.

COUNCIL.

Arthur H. Bailey, F.I.A.	Frederick Halsey Janson, F.L.S.
Alfred Edmund Bateman, C.M.G.	John Scott Keltie, F.R.G.S.
Henry R. Beeton.	Robert Lawson, LL.D.
*James Bonar, M.A., LL.D.	Charles S. Loch, B.A.
Stephen Bourne.	*Geo. B. Longstaff, M.A., M.D., F.R.C.P.
J. Oldfield Chadwick, F.R.G.S.	John Biddulph Martin, M.A.
Hyde Clarke.	Richard Biddulph Martin, M.A., M.P.
Major Patrick George Craigie.	Francis G. P. Neison, F.I.A.
*Frederick C. Danvers.	*The Right Hon. the Earl of Onslow, G.C.M.G.
Thomas Henry Elliott.	*Thomas J. Pittar.
*Frederick Brooksbank Garnett, C.B.	Sir William C. Plowden, K.C.S.I.
The Right Hon. Viscount Grimston.	Sir Francis S. Powell, Bart., M.P.
Rowland Hamilton.	L. L. Price, M.A.
Frederick Hendriks, F.I.A.	Richard Price-Williams, M.Inst.C.E.
Noel A. Humphreys.	John Rae, M.A.

Those marked * are new Members of Council.

TREASURER.

Richard Biddulph Martin, M.A., M.P.

HONORARY SECRETARIES.

John Biddulph Martin, M.A. | Alfred Edmund Bateman, C.M.G.
Major Patrick George Craigie.

FOREIGN HONORARY SECRETARY.

John Biddulph Martin, M.A.

The abstract of receipts and payments, and the balance sheet of assets and liabilities on 31st December, 1892, are subjoined, together with the report of the Auditors on the accounts for the year 1892:—

(I).—ABSTRACT of RECEIPTS and PAYMENTS for the YEAR ending
31st DECEMBER, 1892.

RECEIPTS.		PAYMENTS.	
	£ s. d.		£ s. d.
Balance in Bank, 31st } December, 1891 ... }	£371 17 6	Rent	£316 17 6
		Less sublet	75 - -
			241 17 6
Balance of Petty Cash. 35 - 8		Rates and Taxes	50 5 6
" Postage } Account }	5 1 7	Fire, Lights, and Water	42 11 4
	411 19 9	Repairs, Furniture, &c.....	120 - 8
		Salaries, Wages, and Pension ...	518 11 5
Dividends on 2,900 <i>l.</i> Consols Stock	77 15 4	Journal, Printing.....	£487 8 9
Subscriptions received:—		" Shorthand } Reporters }	29 1 8
49 Arrears	£102 18 -	" Literary } Services }	22 1 -
			538 11 5
707 for the year } 1892	1,484 14 -	Ordinary Meeting Expenses	26 6 2
22 in Advance	46 4 -	Advertising	50 5 1
—	1,633 16 -	Postage and delivery of Journals..	69 7 8
778		Stationery and Sundry Printing...	55 11 5½
		Library.....	94 - 8
4 Compositions.....	84 - -	Incidental Expenses	51 12 6½
Journal Sales	157 14 8	Guy Medal	24 - -
Advertisements in Journal	26 5 -		1,883 1 5
		Balance per Bank } Book	£474 6 1
Total.....	£2,391 10 9	Balance of Petty Cash	29 6 3
		" Postage } Account	4 17 -
			508 9 4
		Total	£2,391 10 9

(Signed)

“ J. O. CHADWICK, F.C.A.,
“ T. J. PITTAR,
“ DAVID F. SCHLOSS, } *Auditors.*”

“ 9th February, 1893.

(II.)—BALANCE SHEET of ASSETS and LIABILITIES, on 31st DECEMBER, 1892.

LIABILITIES.				ASSETS.			
	£	s.	d.	£	s.	d.	
Harrison and Sons, } for Journal	161	13	-	Cash Balances	508	9	4
Janson, Cobb, Pear- } son, and Co.	24	16	8	2,900 <i>l.</i> New 2½ per cent. Consols } costing }	2,760	14	5
Miscellaneous, as per } list	69	9	3	Property: (Estimated Value of)—			
			255 18 11	Books in Library.....	£1,500		
22 Annual Subscriptions received } in advance	46	4	-	Journals, &c., in Stock	1,500		
			302 2 11	Pictures, Furniture, } and Fixtures.....	500		
Balance in favour of the Society*	6,755	14	4		3,500	-	-
			£7,057 17 3	Lease of Premises (cost)	500		
				Less amount written off } for time expired (nine } years)	315		
					185	-	-
				Arrears of Subscriptions reco- } verable (say)	100	-	-
				Sundry Debtors	3	13	6
					£7,057	17	3

(Signed)

"J. O. CHADWICK, F.C.A.,

"T. J. PITTAR,

"DAVID F. SCHLOSS,

} Auditors."

"9th February, 1893.

* This balance is exclusive of the present value of the absolute Reversionary Interest bequeathed to the Society by the late Dr. Guy.

(III.)—BUILDING FUND (ESTABLISHED 10th July, 1873), BALANCE SHEET, on 31st DECEMBER, 1892.

LIABILITIES.				ASSETS.			
	£	s.	d.	£	s.	d.	
Amount of Fund in- } vested from last } Account	234	5	6	Invested as per last Account in Metro- politan Consolidated 3½ per Cent. Stock, in the name of the Treasurer, Richard B. Martin, Esq.—			
Balance since invested	7	12	8	Stock.		Cost.	
			241 18 2	£223 10 9		234 5 6	
Dividends received during 1892.....			7 16 11	Purchased	8 9 8		9 10 10
			£249 15 1	Balance to be invested		5	18 9
					£232 - 5		£249 15 1

(Signed)

"J. O. CHADWICK, F.C.A.,

"T. J. PITTAR,

"DAVID F. SCHLOSS,

} Auditors."

"9th February, 1893.

“REPORT OF THE AUDITORS FOR 1892.

“The Auditors appointed to examine the Treasurer’s Accounts of the Society for the Year 1892,

“REPORT:—

“That they have compared the Entries in the Books with the several Vouchers for the same, from the 1st January to the 31st December, 1892, and find them correct, showing the Receipts (including a Balance of 411l. 19s. 9d., from 1891) to have been 2,391l. 10s. 9d., and the Payments 1,883l. 1s. 5d., leaving a Balance in favour of the Society of 508l. 9s. 4d. at the 31st December, 1892.

“They have also had laid before them an Estimate of the Assets and Liabilities of the Society at the same date, the former amounting to 7,057l. 17s. 3d., and the latter to 302l. 2s. 11d., leaving a Balance in favour of the Society of 6,755l. 14s. 4d., exclusive of the present value of the absolute Reversionary Interest bequeathed to the Society by the late Dr. Guy.

“The amount standing to the credit of the Building Fund at the end of the year 1892, was 249l. 15s. 1d., of which 243l. 16s. 4d. was invested in 232l. —s. 5d. Metropolitan Three and a Half per Cent. Stock, in the name of the Treasurer, R. B. Martin, Esq., M.P., thus leaving a balance of 5l. 18s. 9d. to be invested.

“They have verified the Investments of the Society’s General Funds and Building Fund, and also the Banker’s Balance, all which were found correct.

“They further find that at the end of the year 1891 the number of Fellows on the list was 1,019, which number was diminished in the course of the year to the extent of 70, by Deaths, Resignations, and Defaulters, and that 45 new Fellows were elected, leaving on the list on the 31st December, 1892, 994 Fellows of the Society.

(Signed)

“J. O. CHADWICK, F.C.A.,

“T. J. PITTAR,

“DAVID F. SCHLOSS,

} *Auditors.”*

“9th February 1893.

PROCEEDINGS of the FIFTY-NINTH ANNUAL GENERAL MEETING.

The PRESIDENT, CHARLES BOOTH, ESQ., in the Chair.

MR. A. E. BATEMAN (Hon. Secretary) read the circular convening the meeting.

The minutes of the last ordinary meeting were read and confirmed.

The Report of the Council was taken as read.

The PRESIDENT moved: "That the Report of the Council, the Abstract of Receipts and Payments, the Balance Sheet of Assets and Liabilities, and the Report of the Auditors for 1892 be adopted, entered on the minutes, and printed in the Journal." The annals of the Society had been uneventful, and did not call for any particular remark. The Council would be glad to see more members, not only for the sake of the funds, but also as a sign of vitality, and he would appeal to existing Fellows to bring in others who would be likely to further the interests of the Society.

Mr. ROWLAND HAMILTON seconded the motion, which was carried unanimously.

Sir E. H. CARBUTT and Mr. JOHN GLOVER were appointed Scrutineers of the Ballot, and the proposed list of Council and Officers for the ensuing session was unanimously adopted. The thanks of the meeting were, on the motion of the President, given to the Scrutineers.

The PRESIDENT, in handing the Silver Guy Medal to Mr. JOHN GLOVER, said that it was his pleasing duty to express, on behalf of the Society, their appreciation of the contributions which Mr. Glover had from time to time made to the Journal. According to the Rules, the medal could only be awarded to the author of a paper read within the last two years; but they could not forget that Mr. Glover's paper was the fourth of a series of decennial papers, all of the utmost value in connection with a subject of so great interest as shipping tonnage statistics. He had the more pleasure in presenting the medal to Mr. Glover, since he himself was at present the possessor of the only other medal which had as yet been awarded.

Mr. GLOVER said that no one could have been more surprised than he had been to receive, in a particularly agreeable letter from the President, the announcement that the Council proposed to confer this medal upon him. He was quite unconscious of having deserved such an honour, but he was none the less grateful for it. He might perhaps say that at an early period of his attendance at

the Society's meetings in St. James's Square, he had come to the conclusion that those who read papers on subjects about which they knew nothing but what they had learnt from statistics, were very apt to make mistakes, and that it would be advantageous for Fellows to write about subjects with which they had an intimate acquaintance apart from statistics. He had begun his first paper with the idea that it was not improbable that a continuous record in the Society's Journal, relating to so great an industry, would be of advantage to those who came after him, and he had therefore continued the work as a labour of love, and without any thought of receiving such an acknowledgment as had now been made to him. He was greatly obliged to the Society, and if he could live and continue in health to complete another such paper, it would be a great pleasure to him to do so. Whether he did so or not, however, he hoped that there would be other labourers in the field to take up the work where he left it. In the course of the period covered by these papers, the question of shipping had become enormously more important than it was previously, for as two-thirds of our food now came from abroad, the relation of food to the shipping question was totally different and far more vital than it was thirty years ago. He did not know of any question on which Englishmen ought to keep a more vigilant eye, and he certainly hoped that the nation would take care that we maintained our position at sea in every respect.

Mr. F. C. DANVERS then moved a vote of thanks to the President, Council, and Officers for their services during the past session.

Mr. T. J. PITTAR seconded the resolution, which was carried unanimously.

The PRESIDENT, while thanking the Fellows in the name of the Council for the resolution, said that he desired to give his own thanks to the Past President and the Vice-Presidents for having so kindly taken his place at a time when the state of his health compelled him to be abroad.

RURAL DEPOPULATION. *By* G. B. LONGSTAFF, M.A., M.D., F.R.C.P.

[Read before the Royal Statistical Society, 20th June, 1893.

CHARLES BOOTH, Esq., President, in the Chair.]

THE "alarming depopulation of our rural districts," has of late been the subject of many articles and even more speeches. Able journalists have discoursed on the causes, and ambitious politicians, anxious to catch the votes of an ignorant electorate, have vied with one another in suggesting remedies, but few persons seem to have had time or inclination to take a comprehensive view of the actual facts. It is the business of the statistician to clear the way by ascertaining and recording the precise state of the case, and so determine the geographical extension and numerical intensity of the phenomenon; when this has been done then, and then only, shall we be in a position to dogmatise as to causes and remedies. To make my meaning clear: if the alleged depopulation be the result of a bad method of government, or a prejudicial system of land tenure, we should expect to find the phenomenon coextensive with these evils; is this in fact the case, or is it not? The present moment seems to be especially opportune for such an inquiry, not only because many "remedial measures" are now under discussion, but because a recent census has brought the facts up to date.

First, I would premise that the word "depopulation" is often very vaguely employed, but that here it will be used as denoting *a diminution in the number of the inhabitants of a district, as compared with those enumerated at a preceding census*, quite irrespective of the extent of such diminution. We shall find that, as a matter of fact, such diminution amounts as a rule to but a small fraction of the initial population, a loss of 10 per cent. in twenty years being unusually large, and a loss of 25 per cent. quite exceptional.

Taking the case of England and Wales first. The matter is not so simple as might be at first supposed; although everyone has a general idea of what is meant by *rural* as distinguished from *urban* population, it is not so easy in all cases to draw the line. On the one hand the country residences and suburban villas of more or less well-to-do townspeople are to be found invading the country and adding considerably to its population, yet their inmates though *in* the country are not *of* it, and they are not attracted or repelled by the same causes as the farmers and

labourers. Again the greater part of the smaller towns—all the organisation of the local markets and local government, as well as the tradesmen and professional men who supply the immediate needs of the scattered farms and villages—are an essential part of the rural organism. We are therefore only able to draw the line roughly, and on the one hand must exclude the fringes of growing cities, and on the other hand must include in our rural population the minor towns that are not obviously dependent on mines or manufactures. Of course this makes strictly accurate comparisons at successive intervals impracticable, yet with a little care we may make our limits of probable error so narrow as not to invalidate the argument. For this reason I shall not lay any stress on small differences nor usually go beyond the first place of decimals.

In the "Census of England and Wales, 1881" (vol. iv, p. 9), it is stated that whereas "the town population, *i.e.*, inhabitants of "the districts and sub-districts, which include the chief towns," increased in the census intervals since 1851 by 19·41, 18·09, and 19·63 per cent. respectively, "the country population, *i.e.*, the "inhabitants of the remainder of England and Wales, which comprises the smaller towns and the country parishes," increased by only 4·12, 7·32, and 7·42 per cent. respectively. Again, the "Preliminary Report of the Census of England and Wales, 1891" (p. viii), tells us that in the ten years 1881-91, the "urban sanitary districts" increased by 15·3 per cent., whereas the "rural sanitary districts" increased by only 3·4 per cent., "and" the report adds, "these figures may be taken as representing with "sufficiently approximate accuracy the respective increases in the "urban and rural populations." If this be the whole of the matter *cadit quæstio*, there is no rural depopulation. But of course it is not so; while our rural population, defined as above, and *taken as a whole* is still increasing, though it be but slowly, yet at the same time a *local* depopulation, or more exactly diminution of population, is actually occurring in many localities. That the average rate of increase in the country districts is less, considerably less, than that of the towns is not surprising, since not only does the country supply the towns with men, but the rural population which supplies our mushroom cities with food is (thanks to railways and steamships) to be found to-day on the prairies and pampas of America, on the sheep runs at the Antipodes, or on the sultry plains of India.

Firstly let us consider the counties (geographical) of which this country is made up (see Tables I and II). In the majority there has been an increase, varying indeed in extent but yet continuous. In some there has been a to and fro movement, thus Cambridge has gone up and down in numbers since 1851, and its population is now

only 3,345 more than it was forty years ago; Dorset lost 4,746 in 1871-81, but regained 3,518 in 1881-91; Norfolk lost 7,916 in 1851-61, but had more than recouped this in the next twenty years; Suffolk experienced a trifling decrease in the decade 1851-61; Wilts lost no less than 6,969 in the twenty years 1841-61, but has been increasing ever since; Westmoreland lost 819 in 1871-81, but it gained 1,907 in 1881-91. On the other hand Cornwall has decreased continuously since 1861, and has lost in all 46,801, Hereford since 1871 has lost 9,571, Huntingdon since 1861 has lost 6,478, Rutland since 1851 (with a trifling exception) has lost 2,536, and Shropshire since 1871 has lost 11,795. The total loss has amounted to 4·8 per cent. in Salop, 7·5 per cent. in Hereford, 10·1 per cent. in both Huntingdon and Rutland, and 12·7 per cent. in Cornwall. As regards the Welsh counties there has been an intermittent decrease in Merioneth, Montgomery, Radnor, and Anglesey, but since 1871 Montgomery, Radnor, and Cardigan have decreased continuously; Brecknock and Pembroke continuously since 1861, whereas in Carnarvon and Flint the first decrease showed itself at the last census, when indeed it was found that nine out of the twelve Welsh counties had decreased during the decade, Cardigan and Montgomery having been truly decimated. The total loss in the Welsh counties varies from 0·9 per cent. in Carnarvon, and 4·0 per cent. in Flint, to 14·4 per cent. in Radnor, 14·8 per cent. in Cardigan, and 16·7 per cent. in Montgomery.

Another way of putting these facts is as follows: In the English and Welsh counties the first signs of a diminution of population showed themselves at the census of 1851 in Wilts, Merioneth, Montgomery, and Radnor. In 1861 the movement was found to have continued in Wilts and Montgomery, but to have ceased in Merioneth and Radnor, it had however commenced in Cambridge, Norfolk, Rutland, Suffolk, and Anglesey. The census of 1871 showed an increase in all these counties except Anglesey, but on the other hand there was a diminution in Cornwall, Huntingdon, Brecknock, and Pembroke. In 1881 it was found that the depopulation of the four last named counties continued, while Cambridge, Rutland, Montgomery, and Radnor were again decreasing, and a decrease was observed for the first time in Dorset, Hereford, Shropshire, Westmoreland, and Cardigan. The decrease in Anglesey was however checked. Finally the census of 1891 proved that the decrease had been checked in Cambridge, Dorset, and Westmoreland, that it had continued in Rutland, Cornwall, Huntingdon, Hereford, Shropshire, Montgomery, Radnor, Brecknock, Pembroke, and Cardigan, while the decrease had reappeared in Anglesey and Merioneth, and had shown itself for the first time in Carnarvon and Flint.

The result may be stated in yet another way: while the population of England and Wales as a whole has been steadily growing, the following counties are practically in the same (absolute) position now as they were many years ago, viz.: Dorset as in 1871, Shropshire as in 1861, Hereford, Huntingdon, Brecknock, and Pembroke as in 1851, Cornwall, Rutland, and Anglesey as in 1841, Cardigan as in 1831, Montgomery and Radnor as in 1821.

Tables I and II show that the depopulation of rural Wales began somewhat earlier, and has been much more general and intense than that of rural England.

But the facts thus set forth are likely to convey a false impression, the boundaries of the geographical counties are very artificial, comprising the most diversified areas, the inhabitants of which are differently affected by the operation of like causes.

To take a few instances: while Cambridgeshire increased by only 3,345 in forty years, the town of Cambridge alone increased double as much as this in twenty years, so that there must have been in reality a considerable rural depopulation in that county. Again, in Dorset the town of Poole has been growing rapidly; in Norfolk also, if allowance be made for the growth of Great Yarmouth and Norwich, it will be found that the rural portions of that county have continued to lose population. The gain of population in Westmoreland in 1881-91 was mainly confined to Kendal and Ambleside, some of the districts losing 10 per cent. during the decennium. In Wiltshire the growth of New Swindon (17,245 in twenty years) and Salisbury (3,077 in twenty years) more than doubled the growth of the whole county.

"The Preliminary Report of the Census of England and Wales, 1891" (p. vi), says: "The increase of population was by no means equably spread over the country. In 271 of the 632 registration districts into which England and Wales are divided for registration purposes, the returns show an actual falling off in the number of inhabitants, and in 202 out of these 271 districts there had also been a decline of population between 1871 and 1881." I have endeavoured to examine this statement somewhat closely. The method I have selected is this: all the registration districts (or in a few cases sub-districts) in each registration county, which have exhibited a decrease of population in either of the last two decennia, have been noted, then all districts (or sub-districts) comprising towns of considerable size have been excluded (since the loss of citizens, which the central parts of large towns often suffer, is obviously quite a distinct phenomenon), and the populations of the districts so selected (amounting in all in 1871 to 5,033,022) have been then lumped

together for each county, and taken to represent their rural populations. I have thus been enabled to compare the behaviour of the more rural populations of each part of the country in the two periods 1871-81 and 1881-91. Individual registration districts are too small for valid comparisons, but by this method of grouping, sufficiently large units are obtained; moreover the county units admit of grouping into registration divisions. My reason for not adopting the more obvious method of taking for the rural population that of the county less the towns, is that I wished as far as practicable to exclude those rural districts which are gaining population by becoming more and more residential. I wished as far as possible to deal with a population dependent solely upon the cultivation of the soil.

It will be observed from the table that during the decade 1871-81 the rural portions of England and Wales here compared lost, in nine registration divisions, 173,677 persons; but as a set off against this there was a gain of population in the North-western and Welsh divisions of 11,965, leaving a net loss of 161,712 persons, or 3·2 per cent. During the decade 1881-91 all the registration divisions lost rural population, amounting in all to 160,145 persons, or 3·3 per cent. It thus appears that taking England and Wales as a whole the amount of rural depopulation was practically the same in the two decades, both in absolute amount and relatively. Nevertheless there were considerable local differences, thus in the first decade the rural depopulation was greatest in the South-western, South-midland, and Eastern registration divisions, amounting to 130,723, or eight-tenths of the whole, but in the second decade the depopulation of these divisions fell off to 47,733, or less than three-tenths of the whole. *Per contra*, in the first decade, the rural depopulation of Yorkshire was trivial, amounting to only 4,757, and in the Welsh division there was an actual increase of 8,853, whereas in the second decade Wales headed the list with 42,213, and Yorkshire stood third with 18,724, so that these two divisions made up together three-eighths of the whole.

As regards the individual counties, in the following the rural population was very notably *less* in the last decade than in the preceding, viz.: Hampshire, Berkshire, Buckingham, Oxford, Bedford, Cambridge, Essex, Suffolk, Wilts, Dorset, Devon, Cornwall, Somerset, Stafford, Worcester, Derby, Westmoreland, and Brecknock.

In the following counties the movement was very markedly *greater* in the second period, viz.: Sussex, Northampton, Shropshire, Rutland, Lincoln, York, Northumberland, Monmouth, Carmarthen, Pembroke, Cardigan, Montgomery, Flint, Denbigh, Merioneth, Carnarvon, and Anglesey.

Taking the twenty years 1871-91 the percentages of rural population lost vary in the following counties from 16·0 to 10·0 per cent., viz.: Durham, Cardigan, Westmoreland, Montgomery, Huntingdon, Radnor, Leicester, Cumberland, Cornwall, Monmouth, and Devon. That is to say that these eleven counties (as regards the selected districts) have lost from $\frac{1}{6}$ to $\frac{1}{10}$ of their rural population. In twenty-three other English and Welsh counties the total loss has varied between 8·7 and 5·0 per cent. or say from $\frac{1}{12}$ to $\frac{1}{20}$.

It should be borne in mind throughout these calculations that changes in the boundaries of districts have been made from time to time; but so far as possible adjustments have been made, and I believe that when several districts are grouped together any errors resulting from this cause may be neglected as trifling.

Lastly, in the case of three typical corn growing counties, far removed from the disturbing influences due to mineral wealth, namely, Norfolk, Suffolk, and Essex, I have carried the analysis much further back with, what I venture to think, interesting results.

These counties contain in all fifty-six registration districts, and each successive census proved that:—

In the decennium 1801-11	two districts decreased.
" '11-21	} every district <i>increased</i> .
" '21-31	
" '31-41	
" '41-51	four districts decreased.
" '51-61	thirty-eight "
" '61-71	thirty-two "
" '71-81	thirty-three "
" '81-91	thirty "

Adding together the recorded losses we get:—

In the decennium 1801-11	the aggregate loss was	1,009
" '11-21	"	} Nil
" '21-31	"	
" '31-41	"	
" '41-51	"	618
" '51-61	"	30,706
" '61-71	"	13,359
" '71-81	"	24,748
" '81-91	"	13,874

Thus we see that prior to 1851 the only decreases that occurred were trivial in amount, that the movement set in suddenly after 1851, but since that time has been strong and fairly constant, so that four Essex districts, seven Suffolk districts, and nine Norfolk districts have shown smaller numbers at every successive census, viz.: in 1861, 1871, 1881, 1891. (See Table VII.)

The loss in the Essex districts has varied from 7·4 to 18·8 per cent. of the 1851 population; the loss in the Suffolk districts from 8·9 to 26·8 per cent.; the loss in the Norfolk districts from 9·3 to 19·7 per cent.

The twenty districts had an aggregate population in 1851 of 377,312, but this dwindled in forty years to 325,575, involving a loss of 52,081 inhabitants, or 13·8 per cent.

[It is curious that in another eastern county, Cambridgeshire, while every one of its nine districts increased in 1841-51 every one of them decreased in 1851-61, and again every one increased in 1861-71, and in 1871-81 seven out of nine once more decreased. In the decade last completed the movement was more nearly balanced, five districts increasing and four decreasing.]

Contrast with this a like examination of four typical south western counties,—Dorset, Devon, Wilts, and Somerset—now chiefly devoted to grazing.

The four counties in question comprise sixty-five registration districts; it appears that:—

In the decennium 1801-11 all *increased*.

"	'11-21	"
"	'21-31	two decreased.
"	'31-41	four "
"	'41-51	twenty-four decreased.
"	'51-61	forty-two "
"	'61-71	twenty-three "
"	'71-81	forty-seven "
"	'81-91	thirty-nine "

The amount of the movement was as follows:—

In the decennium 1801-11	the aggregate gross loss was	}	Nil
"	'11-21		
"	'21-31	"	347
"	'31-41	"	1,918
"	'41-51	"	14,055
"	'51-61	"	32,781
"	'61-71	"	14,071
"	'71-81	"	45,373
"	'81-91	"	25,970

In Wessex then the rural exodus began ten years earlier than in East Anglia, and it began more gradually. In the two decades 1851-61 and 1861-71 the numbers were curiously alike in the two groups of districts chosen, but during the last twenty years the volume of the migration has been about twice as great in the west as in the east.

Table VIII shows that nine western districts have in fifty years lost on an average 22·2 per cent. of their initial population. While Table IX shows that seven other western districts have in forty

years lost 14·9 per cent. of their aggregate initial population. The extremes for individual districts range from 10·0 per cent. to 27·8 per cent.

I thought it best not to include Cornwall since the depopulation of that county, which, by the way, is not confined to the rural parts, is governed by the decay of a special industry—tin and copper mining. It is indeed not improbable that the same cause is responsible for the decline of one or two of the Devonshire districts included in my tables.

In many cases during the long period of time under review the boundaries of districts have been altered; in the more important cases these have been accurately adjusted so as to compare like areas throughout, in other cases rough adjustments have been made, while the numerous trivial alterations have been neglected, as unimportant for my purpose.

In concluding this part of the subject, it should be noticed that selected areas have been chosen typical of the two parts of England in which the so-called rural depopulation is most marked. We find in the east a group of selected districts which has lost 13·8 per cent. of its population in forty years, in the west two groups, one of which has lost 22·3 per cent. in fifty years, the other 14·9 per cent. in forty years. Or, taking altogether, a selected population of two-thirds of a million has lost 100,000, or 16 per cent., in nearly half a century. When it is considered that side by side with these selected districts were others which either decreased intermittently, or not at all, and that the parts of England examined are those in which the loss of peasantry has been greatest, it will be admitted that deplorable as such loss may be—and it is deplorable on many grounds—we must not be led away by vague generalisations as to our country villages being emptied and the land left a solitude.

There is another way of looking at this: Wilts, Dorset, Norfolk, Devon, and Suffolk, contain few towns of any size, yet Suffolk, the most densely populated of the five, contains 249 persons to the square mile, and with the exceptions of Massachusetts and Rhode Island, no State of the American Union is so densely populated. Wilts is the most rural of the five, its largest town is New Swindon (27,295), yet its density, 193 persons to the square mile, is equal to that of New Jersey, and is far greater than that of Connecticut, New York, or Pennsylvania, and double that of Ohio or Delaware.

In Table VI the English and Welsh counties are arranged in order of their growth since 1851, and also in order of their density in that same year. From this it is clear that as a general rule the counties that were sparsely populated in 1851 have since

that date either actually decreased or remained nearly stationary, or at all events exhibited but a very moderate rate of increase; whereas, on the other hand, the counties that were densely populated in 1851, have for the most part increased very considerably since. The chief exceptions to this rule are: (1) Merioneth, North York, Cumberland, Northumberland, Glamorgan, and Essex, which have all increased much more rapidly than the rule would imply. The explanation is simple, Essex has been filled up with the overflow of East London, while the other counties have been the scenes of great mining developments. On the other hand the increase in Cornwall, Somerset, Flint, and Metropolitan Middlesex, has been much less than we might have expected. The failure of the mines, or rather foreign competition, explains the decay of Cornwall; the fact that the portion of Middlesex within the county of London was, even in 1851, to a great extent covered with houses, forced the growth of London into other directions.

As to the causes of such rural depopulation as we find to have taken place in England and Wales, I shall in this part of the paper refer only to one, viz., free trade. Free trade has almost certainly fostered the movement from country into town in two ways: its forces have been at once attractive and repulsive. By lowering the prices of agricultural produce, more especially wheat, it has made farming less profitable, turned cornfields into pastures, and so driven the people from the country. By increasing the volume of foreign trade it has increased the demand of the manufacturing districts for labour, and so has drawn the people into the towns.¹

Scotland.

The total population of Scotland has like that of England increased in every decennium of the present century, but as regards its constituent parts the irregularities of growth have been even greater than in the larger kingdom.

Scotland is divided into thirty-three counties,² which, however, (with the exceptions of Lanark and Edinburgh) have such small populations that they are in this respect comparable with English registration districts rather than English counties. Of these thirty-three counties no less than twenty-one have exhibited a decrease of population at one or other of the last six enumerations of the people, so that only twelve have increased without inter-

¹ In the discussion which followed the reading of the paper, Mr. John Walter called attention to the effect of the relaxations of the Law of Settlement in promoting rural depopulation. This was alluded to in my article in the "Dictionary of Political Economy," but it is really only a special form of the "improved communications," on which I lay much stress in the latter part of this paper.

² Counting Ross and Cromarty as one.

mission for the past sixty years; indeed few countries exhibit the phenomenon of rural depopulation in a more marked degree or extending over a longer period.

There were fewer inhabitants in 1891 than in 1881 in sixteen counties.

"	'71	„	fifteen	„
"	'61	„	"	„
"	'51	„	thirteen	„
"	'41	„	twelve	„
"	'31	„	nine	„
"	'21	„	six	„
"	'11	„	four	„
"	'01	„	three	„

The three counties which have the distinction of smaller populations in the present day than at the beginning of the century are Sutherland, Kinross, and Argyll.

Three counties reached their maximum in 1831, viz., Perth, Kinross, and Argyll.

Inverness reached its maximum in 1841.

Five counties reached their maximum in 1851, viz., Sutherland, Ross with Cromarty, Dumfries, Kirkcudbright, and Wigtown.

Five counties reached their maximum in 1861, viz., Shetland, Orkney, Caithness, Berwick, and Roxburgh.

Three counties reached their maximum in 1881, viz., Nairn, Elgin, and Haddington.

The remaining sixteen counties had more inhabitants in 1891 than at any previous census.

It may here be remarked that the Registrar-General for Scotland deals with nine "principal towns," the census of 1891 showed an increase of population in eight of these (Greenock being the exception); moreover, eight of these principal towns are situated in counties which have exhibited a continuous growth, Perth being the solitary exception.

In strict accordance with this we learn from Tables X and XI (which are compiled from the "Appendix Tables" attached to the reports of the Censuses of Scotland, 1881 and 1891) that while the towns and villages, taken as a whole, have been increasing for the past twenty years, the rural districts, taken as a whole, have decreased, and consequently the town population forms now a notably larger proportion of the whole, and the rural population a notably less proportion. Where the population is dense it tends to increase, where it is sparse it tends to decrease.

Table XII gives the year in which each Scottish county reached its maximum, the population in that year, and, for comparison, the population in 1891; also the absolute and percentage decrease from the maximum to the last census. From this we learn that the

decrease was trivial in Elgin and Roxburgh, but exceeded 10 per cent. in six counties, viz., Perth, Berwick, Sutherland, Wigtown, Argyll, and Kinross; in the last two it amounted to 25·7 and 30·8 respectively.

The total loss of population was 91,578, or exactly 10 per cent. of the aggregate maximum populations of the seventeen decreasing counties.

At this point it seems well to digress from the proper sequence, in order to say something about the causes of this depopulation in Scotland, since the question naturally arises, "Is not the depopulation in this case due to the creation of large deer forests and the consequent displacement of the peasantry?"

The materials for an answer to this question are to a great extent furnished by a Return to the House of Commons, dated 4th August, 1891, which gives certain "particulars of all deer forests and lands exclusively devoted to sport in Scotland."

In Tables XIII, XIV, and XV are embodied the chief results of a careful examination of this return, from which it may be gathered that prior to 1883 there were 2,292,153 acres in Scotland devoted to deer forests and grouse moors; of this area some two-thirds were within the counties of Inverness and Ross with Cromarty, and a quarter in Argyll, Aberdeen, and Sutherland. Since 1882 some 274,980 acres have been afforested in the counties of Inverness, Ross with Cromarty, Sutherland, and Argyll, making in all 2½ million acres devoted to sport.³

The number of persons displaced by afforestation is not stated, but there are several indications that at any rate the greater part of the land can be of but trifling agricultural value, thus:— (1.) Two-thirds of the estates comprised land having an altitude exceeding 2,500 feet above the sea level, while in only four estates was the highest land under 1,000 feet; it is therefore evident that they are largely composed of mountains. (2.) In about half the estates (comprising 1,240,000 acres) the rent both before and after afforestation is given; in the very great majority of cases the sporting rent is higher than the old rent, often several times as great. In the cases in Table XIV the reverse is the case. It will be noted in about 200,000 acres the rent has fallen 18 per cent., in 10,000 acres as much as 34 per cent., this being the extreme, though in 47,000 acres the fall ranged from 26 to 28 per cent. (3.) The next Table XV shows that the rent before afforestation as regards more than one-fourth of the acreage for which the facts are available, ranged from *nil* to 2½*d.* an acre; as regards nearly half the acreage it ranged from 3*d.* to 8*d.*; and in less than

³ The forest in Bute and five of those in Inverness have been added to subsequently to 1883, but the precise amounts so added are not given.

one-fourth of the acreage from 9*d.* to 1*s.* 8*d.*, the last being the highest rental recorded. It is therefore abundantly proved that these vast tracts of country can have contained but an insignificant proportion of land adapted to agriculture.

In this association it may be noted that although rural depopulation in Scotland is most striking in the Highlands, and more especially in the extreme north and west, yet six of the lowland counties have together lost nearly 20,000 persons.

The proportion of females to males varies very greatly, being in 1891, for the whole of Scotland, 107 females to each 100 males, but ranging from 89, 99, and 100 in Linlithgow, Stirling, and Lanark respectively, to 122, 124, and 136 in Forfar, Bute, and Shetland (see Table XVI).

These varying degrees of disparity of the sexes bear no very obvious relation to increase or decrease of population. Although it is true that the four counties with the lowest proportion of females to males are all counties, the increase of which has been steadily maintained, yet Argyll, a county which has decreased to an extreme degree, shows also a low proportion of females (104), while at the other end of the list are found in close proximity, all with very high proportions of females, a rapidly decreasing county—Shetland, and two counties which have not ceased to increase—Selkirk and Forfar.

Table XVI shows also the density of each county of Scotland in 1851 (calculated from the areas given in the census of 1891) and in 1891. It will be remarked that, with the single exception of the tiny county of Kinross, every county which had in 1851 a density below the average of Scotland, had a like comparatively low density in 1891. Only two counties with low densities—Selkirk and Banff, have continually increased, whereas only three counties with high densities—Kinross, Haddington, and Clackmannan—have in any decade since 1851 failed to increase. The four most sparsely inhabited counties, Sutherland, Inverness, Ross with Cromarty, and Argyll, are among those which have suffered most from depopulation, while the three densest counties—Lanark, Renfrew, and Edinburgh are those which have exhibited the greatest growth.

*Ireland.*⁴

This country presents almost as many peculiarities and points of especial interest to the statistician as to the politician.

Hitherto we have considered the question of local depopulations met with in the midst of large communities, which, taken as a

⁴ Several passages in reference to Ireland, as well as some others in the paper are borrowed, with the kind permission of Messrs. Macmillan, from the author's article on *Depopulation* in the "Dictionary of Political Economy."

whole, exhibit rapid and vigorous growth. In the case of Ireland, and as regards the countries to which I shall call your attention to-night, in the case of Ireland alone, do we meet with a large community which, in almost all its parts and for a very long term of years has constantly and very considerably retrograded in population. It will be a proper matter for consideration whether the same causes have been at work in Ireland as elsewhere, or whether the causes have been as exceptional as the results; whether, that is, we have here the same phenomenon in a much more intense form, or something quite different.

In Table XVII are given the population of Ireland at each census from that of 1821, the increase or decrease in each decade, both in absolute numbers and percentages, also the number of persons to a square mile.

At the beginning of this century the Irish were steeped in poverty, the country was densely populated even in the more barren parts (for one-fifth of the area of Ireland is made up of bog, marsh, and barren mountain), yet the people had few other resources than tilling the soil, which they did in a careless and slovenly manner, demoralised as they were by long dependence upon the potatoe, a crop which in fair seasons feeds 40 persons by the labour of one. Their standard of living was the lowest: poorly clothed and fed, and miserably housed, they were chronically on the verge of starvation; and famines occurred in 1814, 1816, 1822, and 1831. Under these distressing circumstances they continued to multiply till the census of 1841 showed a population of 8,175,124. But already the pressure of population upon the means of subsistence had begun to seek relief by emigration, and the Census Commissioners of 1841 (Census of Ireland, 1841, Report) state, in explanation of the fact that the census numbers fell considerably short of their anticipations, that no less than 428,471 emigrants were recorded as having left Ireland for the colonies, and 104,814 for Great Britain, during the decade 1831-41. Nevertheless the population continued to increase, and is believed to have reached about 8,295,000 by the middle of the year 1845. Now such a population in Ireland involves a density of 263 to the square mile, whereas in 1890-91 we find the following densities in the countries named below:—

Scotland	135	Wales	206
Austro-Hungary	171	Germany	237
France	188	Italy	274

If we consider that these countries have either mineral resources, manufactures, or more genial climates and more fertile soils—or even several or all of these advantages—we may realise

how over-populated Ireland was on the eve of the great famine. It may be said, perhaps, that England supports a population of 541, Belgium 577, and Saxony 605 to the square mile, while Mr. Baines has recently told you that there are in India "nearly 47 million people living in the proportion of 600 to the square mile and over, and more than $36\frac{1}{4}$ millions of them are packed to the extent of 800, or $1\frac{1}{4}$ persons per acre."⁵ But then the first named countries only maintain their populations by enormous importations of food paid for by manufactures, and the conditions of the plains of the Ganges are quite incomparable to those prevalent in the Emerald Isle.

Under circumstances such as these the potatoe rot appeared in 1845 and again in 1846; the staple food of the people failed, and famine was the inevitable consequence. This reached its height in 1847, and brought in its train severe epidemics of typhus and relapsing fevers. So far as can be ascertained fever and starvation between them carried off about 729,000 persons.⁶ Truly such an appalling disaster is without any recent parallel, at all events in Europe.

When the people were again counted in 1851, the population had shrunk to 6,552,385, or 1,622,739 less than in 1841, but 1,742,676 less than the supposed maximum of 1845. The population had thus diminished by 20 per cent. in six years. Nearly three-fifths of this startling depopulation was due to the great exodus of 1847 and the following years, when the Irish poured into Liverpool and Glasgow to spread themselves over England and Scotland, while every ship sailing for Canada or the United States was crowded with men, women, and children, driven, in spite of an ardent love for their native land, to seek new homes in the then almost unknown western lands far over the sea.

The decrease was least in Leinster, greatest in Connaught; it affected every county in Ireland except Dublin; yet while this unexampled depletion of the rural districts was taking place, there was actually an *increase* in nine town districts, amounting in the aggregate to 77,519. Belfast and Dublin each added some 25,000 to their citizens, and the increase amounted to 6 per cent. in Cork, $10\frac{1}{2}$ per cent. in Limerick, 11 per cent. in Dublin, and 33 per cent. in Belfast. Waterford, Kilkenny, Galway, Londonderry, Newry, Wexford, and Queenstown all increased more or less, but Drogheda, Clonmel, Sligo, Tralee, Carlow, and Armagh all declined. Mean-

⁵ Distribution and Movement of the Population in India. By J. A. Baines. *Journal of the Royal Statistical Society*, vol. lvi, p. 8.

⁶ See "Facts and Figures about Ireland," p. 6. By T. W. Grimshaw, M.D., Registrar-General for Ireland. Dublin, 1891. This gives the proportion of one death to every eleven inhabitants.

while the census of 1851 showed that the extent of land under tillage had increased by 2,091 square miles, and the value of the agricultural stock and crops was greater than any previously recorded. No fewer than 355,689 "fourth-class houses," mostly mud cabins, had disappeared, whereas the "first-class houses" had increased by 10,084, and the "second-class houses" by 54,574. In short, the depopulation was accompanied by a very notable rise in the standard of living. Subsequent enumerations have shown the same thing—a continuous (though less rapid) diminution of population accompanied by an improvement in the conditions of life, more especially as regards house accommodation. The 491,278 mud cabins of 1841 were represented by only 20,617 in 1891; in 1846 about 42 out of every 100 families in Ireland lived in a mud cabin having only one room and one window, but in 1891 only 4 families out of every 100; we must however set off against this some increased overcrowding of tenement houses in the large towns.⁷

The census of 1861 recorded a further loss of population, amounting to 753,418, or nearly 12 per cent.; that of 1871 again a loss, but much smaller, 386,590, or nearly 7 per cent.; that of 1881 a still smaller loss, 237,541, or only 4 per cent.; but the last census, that of 1891, brings us back to larger figures, the loss amounting to 470,086, or 9 per cent.

The total loss of population in the half century amounts to 3,470,374, or 42·5 per cent.; this was distributed among the four provinces in the following manner:—

Province.	Loss of Population in Fifty Years.	
	Absolute.	Per Cent.
Ulster	766,559	32·1
Leinster	785,971	39·8
Connaught	694,085	48·9
Munster	1,223,759	51·1
<i>Ireland</i>	3,470,374	42·5

The facts are shown in detail for each county in Table XVII. With the exceptions of Antrim and Dublin (and for the decade, 1871-81, Kerry), *every county showed a decrease at each successive census.* The total loss in fifty years ranged from 27·5, 31·6, 37·4, 38·3, 38·7, and 39·0 per cent. in Down, Londonderry, Donegal, Armagh, Kildare, and Kerry respectively, to 56·5, 56·9, 57·0, 57·8, 58·1, and 60·2 in Clare, Kilkenny, Monaghan, Queen's County,

⁷ See "Facts and Figures about Ireland," pp. 17 and 18.

Meath, and Tipperary respectively. On the other hand Dublin County increased by 12·5 per cent., and Antrim by 20·9.

Many of the towns of Ireland have shared in the general decline; this, while especially true of the smaller towns which are mainly dependent, directly or indirectly, on agriculture, is not confined to such, since Drogheda, and above all, Limerick, cannot be included in this category. Cork and the city of Dublin have not greatly altered in population in fifty years, but around the latter have grown up a ring of suburbs now comprising close upon 100,000 inhabitants. The details are given in Table XIX. Carlow, Clonmel, and Drogheda have decreased without intermission; eight towns reached their maximum in 1851, and have declined since. Clonmel, Kilkenny, and Carlow are now mere ghosts of their former selves, having lost no less than 38, 45, and 46 per cent. respectively. At the other end of the scale stand Londonderry and Belfast, which have shown themselves to be quite independent of the surrounding gloom and depression; the former has more than doubled, having added 18,000 to its population, whereas the latter, by the addition of ten times as many, has much more than trebled itself. Its decennial accretions have been 25,000, 21,000, 53,000, 34,000, and 48,000. As regards its growth and progress, at all events so far as measured by numbers, Belfast need not fear comparison with any city of the United Kingdom, or of the continent of Europe; it ranks indeed with such colonial cities as Montreal, Sydney, and Melbourne, and has not many rivals even in that land of mushroom cities, the United States of America.

My point in referring in such detail to the growth of these towns is to show that the depopulation of Ireland is, in the main, rural, in other words that it is largely a question of employment, or lack of it.

Dr. Grimshaw tells us (*op. cit.*, pp. 19 *et seq.*) that the acreage under crops in Ireland, not counting meadow land, was 1,476,000 acres, or 33 per cent. less during the decade recently completed than in 1851-61, but that the meadow land, *i.e.*, land devoted to the growth of hay, has in the same interval increased by 714,000 acres, or 53 per cent. He adds: "If we turn to the average acreage under crops per head of the population, we find the following remarkable result. In the ten years 1851-60, it was 0·95 acre per person; in the ten years 1861-70, 1·01; in the following ten years 1·00; and in the ten years 1881-90, 1·02. "There has practically been no change in the proportion between cropped land and the number of the people since 1861; and the proportional area is now considerably greater than in 1851. If the large town populations were deducted, and a calculation made for the country population alone, a similar condition would

“be found to exist.” The pasture land has increased since 1851 by 1,550,077 acres, or 18 per cent., partly land formerly under crops, but largely reclaimed land now for the first time brought under cultivation. Sheep have increased by 5, and cattle by 18 per cent., while the pigs, which must on no account be omitted, have multiplied to the extent of 13 per cent. All this tends to show that the Irish farmers pay more and more attention to grazing, less and less to tillage.

A careful examination of the densities of the various counties, as given in the last two columns of Table XVIII, fails to show any marked tendency, such as we find in many countries, for the most sparsely peopled districts to decrease, and the converse.

France.

In the case of France we are again, as in the case of Ireland, confronted with a special problem, which, at all events upon the face of it, appears to be quite exceptional.

French vital statistics are dominated by one fact, a fact the causes of which I do not propose to discuss; of course I allude to the persistently low and ever falling birth-rate. For the twenty years 1872-91, the birth-rate in France averaged 24·65. It may surprise many to hear that for the same period of years the Irish birth-rate was even a trifle lower, viz., 24·61, but the marriage rate in the two countries was very different: in France 15·40, in Ireland 8·95. For comparison it may be stated that the rates in England and Wales for the same periods were 33·78 and 15·51. The low birth-rate in Ireland is sufficiently explained by the small number of married women of child-bearing age. Thus when we compare the number of births with the number of married women of child-bearing age in the three countries, we find that the proportion in Ireland falls but little short of that of England, whereas that of France is little more than two-thirds:—

Census, 1881.

	Married Women, Age 15—45.	Average Annual Births, 1879-83.	Rate per Cent.
England and Wales	2,943,186	885,082	30·07
Ireland	432,298	126,014	29·15
France.....	4,387,889	933,455	21·27

The small proportion of married women in Ireland is explained by the abnormal age distribution of the population, brought about by the large emigration that is constantly taking place. If the age and sex constitution of England and Wales prevailed in Ireland, there would have been in that country in 1881 about

69,000 more men and about 54,000 more women between the ages of 20 and 45; on the other hand, there would have been 81,000 fewer men of more than 45 years of age, and 59,000 fewer women. Emigration has most attraction for young men and women, and it may be added that those left in the old country are not likely to be the most eligible.

The division of France into *départements* and *arrondissements* are very convenient for my purpose; moreover, in the census report of 1886,⁸ there is given in a long table the increase or decrease in every *arrondissement* since the census of 1801, from which I have extracted the following facts:—

France increased from the beginning of the century to 1886 by 41·8 per cent.

France is divided into eighty-seven *départements*, of which at the census of 1886 no less than twenty-nine were decreasing in population. Moreover the following nine; Basses-Alpes, Calvados, Eure, Jura, Lot-et-Garonne, Manche, Orne, Haute-Saône, and Tarn-et-Garonne actually had smaller populations in 1886 than at the beginning of the century. On the other hand the following *départements* have increased without a break from 1801-86:—Allier, Bouches-du-Rhône, Loire, Loire-Inférieure, and Nord.

As regards the first group, though Caen (population 45,201) is in Calvados, and Cherbourg (population 38,554) is in Manche, it may be said that it contains no town of first rate importance. The increasing group on the other hand contains Marseille, Saint Etienne, Nantes, Roubaix, and Lille, all towns of over 100,000 inhabitants.

Again there is a group of twenty-one *départements* which has increased at *almost* every census, the exceptions being neither numerous nor important; amongst these may be mentioned Corse, Finistère, Gironde, Marne, Pas-de-Calais, Rhône, and Seine. This group contains Paris, Lyon, Bordeaux, Le Havre, Rouen, and Reims, not to speak of such towns as Bourges, Besançon, Brest, Tours, Orléans, Boulogne, Calais, Perpignan, and Limoges.

Lastly, there is another group of *départements* of which six:—Basses-Alpes, Eure, Gers, Lot-et-Garonne, Manche, and Orne have decreased in every census interval since 1846, and of which another six:—Ariège, Calvados, Jura, Sarthe, Tarn-et-Garonne, and Vaucluse have, with unimportant exceptions, decreased steadily during the same interval. These twelve *départements* only contain four towns with over 30,000 inhabitants (in 1891), viz.:—Cherbourg, Caen, Avignon, and Le Mans, the last, which is also the largest, only containing 57,412 citizens.

⁸ “Statistique Générale de la France: Résultats Statistiques du dénombrement de 1886,” 1^{ère} partie, pp. 8—21.

If we now proceed to take account of the 362 *arrondissements* into which France is further divided, we get still more interesting results. The 1886 census showed 205 of these to be increasing, and 157 decreasing. Of the increasing *arrondissements* 125 had shown a continuous increase for twenty years or more, whereas of those that showed a decrease in the period 1881-86, as many as eighty-one had been decreasing for at least twenty years.

Yet further, in 1886 it was found that no less than fifty-seven *arrondissements* were smaller than they had been at the beginning of the century, though of course it does not follow by any means that they had all, or even many of them, decreased continually quite the contrary is the fact. Of these fifty-seven shrunken *arrondissements*, thirty-four had decreased by less than 10·0 per cent., and twenty-three by upwards of 10·0 per cent. The greatest losses of population, as compared with 1801, were the following:—

Lectoure (Gers)	20 per cent.
Argentan (Orne)	20 "
Falaise (Calvados)	21 "
Pont Audemer (Eure)	23 "
Agen (Lot-et-Garonne)	23 "

The table in the "Statistique Générale," from which I have derived these facts, makes it easy also to group the *arrondissements* by the census years in which they attained their maximum. Thus we get:—

8 <i>arrondissements</i> reached their maximum at the census of 1806			
13	"	"	'26
8	"	"	'31
15	"	"	'36
17	"	"	'41
56	"	"	'46
44	"	"	'51
9	"	"	'56
14	"	"	'61
25	"	"	'66
2	"	"	'72
10	"	"	'76
16	"	"	'81
124	"	"	'86

From this it would appear that some crisis in rural economy occurred between the years 1846 and 1851, which led to no fewer than 100 out of a total of 361 *arrondissements* reaching their maximum at about that time.

The *départements* of the Seine, Nord, Rhône, and Seine Inférieure were the four densest alike in 1801, 1846, and 1886; moreover, the five *départements* of Basses-Alpes, Hautes-Alpes, Lozère, Corse, and Landes were the five most sparsely inhabited throughout, and

there has been a general tendency for the dense departments to get denser, and the sparse departments to lose population, but it must be admitted that there are many and important exceptions. (See Tables XX and XXI.)

It is possible that the *petite culture*, aided by a fertile soil and a genial climate, has produced the same effect in France as the potatoe did in Ireland, *i.e.*, it may have caused a local over population. It scarcely needs mention, although the fact is of great importance, that the conditions of land tenure in the two countries are as different as can well be imagined.

Table XXII shows that there is a close correspondence between the decreasing departments and those in which the average size of the family is lower even than the low average of France. Two departments that seem exceptions—Gironde and Seine—contain Bordeaux and the capital, and therefore have largely increased owing to immigration, as nearly all large towns do.

In the volume of the “*Statistique Générale de la France*,” from which I have taken these facts, we shall find (p. 37) a table which shows that whereas the “urban population,” or that contained in towns of 2,000 inhabitants and upwards, made up in 1846 only 24·4 per cent. of the total, it amounted in 1886 to no less than 36·0 per cent.; conversely, the rural population had diminished from 75·6 per cent. to 64·0 per cent.

As regards the shorter period, 1881-86, the report enters into considerable detail, and we learn (p. 41) that as regards the urban population:—

77	departments	increased	by	704,495
13	„	decreased	„	34,529

Whereas as regards the rural population:—

27	departments	increased	by	171,430
59	„	decreased	„	294,541

Further, by taking into consideration the births and deaths during the five years, it is possible (p. 44) to ascertain, with some approach to correctness, that the towns gained in 1881-86 by excess of immigration over emigration 626,301 persons, while during the same time the rural parts lost by excess of emigrants over immigrants 455,554. The balance of 170,747 is accounted for by the immigration of foreigners into France, a number fairly confirmed by the returns of birth-places in the census, which gave an increase of the foreign-born of 145,000.

And this brings us to the last point. The French population increases very slowly, but inexorable economic laws exact a revenge which no doubt the French people feel very keenly. The lack of men to do the requisite hewing of wood and drawing of water is

made up by foreign immigrants, more especially Italians and Belgians. The foreigners in France, who made up only 1·1 per cent. of the population in 1851, increased to 2·9 per cent. in 1886, or from 380,831 to 1,126,531. At the census of 1891 there was a decrease of 13,416, but this is probably more apparent than real, since the law of 21st June, 1889, led to the naturalisation of very large numbers of foreigners, who consequently now appear in the census in another category.

Table XXIII shows that in the twenty-five years 1861-86, while the population of France increased by 2,384,001, the foreigners domiciled in France increased by no less than 629,440, so that 26·4 per cent. of the total increase of the population was due to the foreign element.

The census of 1891 more than confirms its predecessors. No less than fifty-five out of the eighty-seven departments decreased, losing collectively 399,001 inhabitants. Of the thirty-two that together increased by 523,210, no less than seven showed a decrease of their rural parts when the large towns were deducted. On the other hand, forty-seven towns, of 30,000 inhabitants and upwards, increased by 350,026 souls, while but nine decreased, and these by only 9,630. It is not surprising that the French government is greatly exercised by this state of affairs.

Spain.

The census of 1887 showed that the population of the whole country, including the Balearic Isles and the Canaries, had increased by only 915,901, or 5·5 per cent. in ten years. Of the forty-nine provinces into which Spain is divided, four were practically stationary, two gaining and two losing two or three hundreds apiece, while four, with an aggregate population of over a million, lost between them 21,080, or 2·0 per cent. These stationary and decreasing provinces contained but two towns with over 30,000 inhabitants, and six out of the eight were sparsely populated, but on the other hand the five largest cities of Spain increased by 151,850, or 14·6 per cent. The provinces are large, with an average of 350,000 inhabitants, and doubtless an examination of their smaller sub-divisions would reveal a much more intense depopulation locally.

Italy.

The returns of the Italian census of 1891 have not yet come to hand. The census of 1881 showed a small decrease in the provinces Belluno and Siena. The provinces are divided into *circondari*, or districts, about five to each. They vary in population from 10,000 to half a million, but numbers between 40,000

and 150,000 are the rule. The 1881 census declared that thirty-six *circondari*, distributed over twenty-three provinces, had decreased. As regards ten of these *circondari*, comprising a total population of about 860,000, the loss amounted to 36,850 in all, and in the various districts ranged from 1,161 to 8,513 in absolute numbers, or from 1·6 to 11·1 in percentages.

The census of 1871 showed a decline in eight *circondari*, distributed over six provinces. Curiously enough in no instance was a decrease recorded in the same district at the two censuses, but this may be partly explained by the fact that as regards eight of the decreasing *circondari* of 1881, no comparison is possible.

Having in view the enormous emigration from Italy to South America, France, and the United States, it would be interesting to go into further details, but I have not been able to spare the requisite time.

As we have found in every other country examined, the great towns of Italy are growing very rapidly, so that we may fairly assume that the depopulation is mainly rural, and would no doubt appear greater still if the medium sized towns were excluded in our comparisons.

Switzerland.

The census of 1880 showed small decreases in the cantons of Aargau and Glarus, but the census of 1888 showed a more marked movement in the same cantons, and also in Uri, Schwyz, Obwalden, and Ticino. At the same time the large towns are all growing, though not to such an inordinate extent as in most countries.

Holland and Belgium.

In both of these countries it is evident enough that the towns are growing much more rapidly than the rural districts, but at present I cannot say more.

Norway.

Since Norway has for many years past sent large numbers of emigrants to the United States, numbers which in proportion to its population rival even those sent by Ireland, one naturally turns to its "fields" and "fiords" for evidences of rural depopulation, and not in vain.

Norway is divided into twenty prefectures. The census of 1875 showed that four of these had lost population since 1865, the loss amounting in all to 12,214 or 2·9 per cent. The census of 1891 showed that one of these four had more than recovered its losses, but that the other three had continued to decrease, though less rapidly, the total loss amounting to 7,951, or 2·5 per cent.

The three prefectures which exhibited a continued decrease for the twenty-six years—Nordre Trondjem, Hedemarken, and Kristians—lost 1,253, 1,313, and 16,904, or 1·5, 1·1, and 13·5 per cent. respectively (see Table XXIV). These three prefectures do not contain any town of 10,000 inhabitants. A more detailed examination of the figures would doubtless show that smaller districts in other parts of the kingdom had lost population, and that the depopulation was more intense in some parts of the prefectures specially referred to.

Table XXV, compiled from the “*Annuaire Statistique de la “Norvège,”* 1892 (pp. 2 and 3), shows that the urban population has been increasing very much more rapidly than the rural ever since 1835; indeed, from 1865 onwards the rural population has become almost stationary.

Sweden.

The available statistics do not enable me to say whether or no local rural depopulation is taking place, but the big towns are growing rapidly, and some of the more rural provinces increase very slowly.

Germany.

The form in which the figures of the German Imperial census are presented does not readily lend itself to my subject, so that I am not able to put the matter in such a clear light as I should have wished.

The census of 1871 was taken under such exceptional circumstances that I have thought it better to confine my attention to those of 1875, 1880, 1885, and 1890, giving three periods of five years each.

From the population of each *Regierungs-Bezirk*, or government district, I have deducted the populations of all *Gemeinden*, or parishes, of 10,000 inhabitants and upwards, and have taken the residues to represent the rural districts. The free towns of Hamburg, Lübeck, and Bremen have small country districts attached to them, but they are so circumscribed, and are being so rapidly covered with suburbs in the cases of Bremen and Hamburg, that I think it best to omit them entirely from consideration.

With these exceptions then, the following general results hold good:—

In every government district, during each of the three periods, the increase in the towns of 10,000 inhabitants and upwards was greater than in the rest of the district.

Aggregating the towns of 10,000 and upwards for each district, in one case only (Stralsund) was there a decrease, and this only

amounted to 76 souls, or 0·2 per cent., and in one case only (also Stralsund) was there an increase of less than 1·0 per cent.

In the very large majority of the towns the increase ranged between 9·0 per cent. and 20·0 per cent. In the exceptional cases of Gera, the suburbs of Berlin, and Königsberg, such figures as 30, 32, and 35 per cent. have been reached.

On the other hand, in the residual populations, which I have taken to represent the rural districts, an increase of population exceeding 9·0 per cent. has been quite exceptional, but such figures as 1—5 are the rule; moreover, in forty-four cases a decrease appeared, usually under 3·0 per cent., but in the case of Königsberg (district) amounting in the last quinquennium to 5·4 per cent.

The following table shows this in more detail, and may perhaps make the matter clearer:—

GERMANY. *Rate of Increase of Government Districts.*

Per Cent.	Times in which such Rate occurred.	
	Town Districts.	Rural Districts.
Increase—		
30—	3	—
25—30	2	—
20—25	10	1
15—20	33	2
11—15	65	—
9—11	55	4
5—9	50	35
3—5	8	69
1—3	—	56
0—1	1	28
Decrease—		
1—0	1	18
3—1	—	22
5—3	—	3
—5	—	1

The increase of the town districts was more marked in the earlier and later periods than in the middle; the decrease or stagnation of the rural districts was most marked in the middle period, least marked in the earliest. This is partly accounted for by the fact that the increase of the population of the German Empire was least in the middle period, in consequence of the very large emigration at that time.

German Empire.

Period.	Emigrants.	Excess of Births over Deaths.	Enumerated Increase.	
			Absolute.	Per Cent.
1885-90.....	485,098	2,915,862	2,566,345	5·5
'80-85.....	857,287	2,597,218	1,621,643	3·6
'75-80.....	227,534	2,890,771	2,506,689	5·9

In fourteen districts, including the two Mecklenburgs, two Bavarian districts, one each in Baden and Würtemberg, Sigmaringen, one each in Silesia and Brandenburg, and the three districts of Pomerania, there was a decrease in both the later periods, *i.e.*, from 1880-90.

If we turn to Prussia we can obtain some information for earlier years in considerable detail. The population is given for the smaller subdivisions or *Kreise*, the towns being given separately from the "open country" (*Plattes Land*).

Out of a total of 333 of these *Kreise*, the census of 1864 showed that thirty-eight had decreased in the three years since the preceding census. Of these thirty-eight *Kreise*, in seven the towns decreased as well as the open country, but in the remaining thirty-one they increased, with these results:—

Thirty-eight Kreise in Prussia.

Increase of towns	+ 42,640
Decrease of towns	— 1,430
Decrease of country	— 16,910

The census of 1867 showed a much more rapid depopulation; no less than 133 *Kreise* decreased, twenty-six of them having also decreased in the earlier period.

Germany differs from England in having comparatively few very large towns, their place being taken (to the advantage of Germany) by numerous towns of more modest dimensions.

Table XXVI is derived from *data* furnished by M. de Beaucaire's paper⁹ in the "Bulletin du Ministère de l'Agriculture de France," Février, 1886. It shows clearly enough that while all the German towns are growing, the largest are growing the most rapidly, but the rural districts are practically in a condition of stagnation. The writer calls special attention to the number and importance of village industries in Germany, as well as to the increased demand for labour produced by the artificial stimulation of the growth and manufacture of beetroot sugar.

The parts of Germany in which there is most evidence of rural depopulation are, as regards Prussia, the following: Pomerania, Posen, Silesia, Westphalia, and the Rhine Province. Outside Prussia it is most obvious in the two Mecklenburgs, Franconia, and Alsace.

The dominant local factors are clearly the rapid development of German manufactures, and the great stream of emigration to the United States.

⁹ "The Migration from the Rural Districts and the Condition of the Agricultural Population in Germany." By M. le Vicomte Rorric de Beaucaire (*Journal of the Statistical Society*, vol. xlix, p. 450).

Austria.

The census of 1880 showed that when the populations of the *Bezirks-Hauptmannschaften* were compared with the figures of the census of 1869, twenty-seven of them showed a decrease, which however amounted to upwards of 4·0 per cent. in three cases only (4·1, 6·0, and 6·8 per cent.) also two small towns exhibited a trifling decrease. The large towns as a rule increased by between 20 and 30 per cent., Vienna by 118,591, or 19·5 per cent., but Prague was an exception, its growth being but 2·9 per cent.

At the census of 1890 no less than fifty-seven *Bezirks-Hauptmannschaften*, as well as two small towns, showed a decrease, which reached 4·0 per cent. and upwards in fifteen cases, 7·8 being the highest figure. The principal towns did not grow so rapidly as in the previous period, but most of them increased by upwards of 10·0 per cent.—Prague by only 2·1 per cent.—but on the other hand, exclusive of suburbs, Vienna added another 113,869 citizens, or 15·7 per cent. Fifteen of the *Bezirks-Hauptmannschaften* decreased in both periods, while in many cases a decrease in one period was associated with a very small increase in the other.

For the earlier period a table in the *Statistisches Jahrbuch* (1881, p. 2, *et seq.*) enables us to compare the smaller subdivisions termed *Gerichts-Bezirke*; it then appears that portions of sixty-three further *Bezirks-Hauptmannschaften* decreased, although there was in these cases a balance of increase for the entire districts. This shows still more clearly that extensive rural depopulation occurred.

Hungary.

The case of Hungary presents some peculiarities, which are in great part due to the remarkably small increase of the total population in the period 1869-80. Thus we see :—

Population of the Kingdom of Hungary.

		Increase in Decade.	
		Absolute.	Per Cent.
1850.....	13,191,553	—	—
'57.....	13,768,513	576,960	4·37
'69.....	15,417,327	1,648,814	11·98
'80.....	15,642,102	224,775	1·46
'90.....	17,349,398	1,707,296	10·91

This is in great part explained by the frightful epidemic of cholera in 1873-74. In the latter of these years the deaths practically equalled the births, but in the former they actually exceeded them by no less than 307,263.

The census of 1880 showed that out of fourteen *Landestheile* no fewer than thirty-six decreased. In thirteen cases the decrease amounted to 5·0 per cent. and upwards, while in one case it reached 13·3 per cent. During the same eleven years, in spite of the small growth of Hungary as a whole, the twenty-eight municipalities all increased in population, and ten of them by 10 per cent. and upwards. Buda Pest, indeed, increased by 33·2 per cent., and Agram (Zagrab) by 43·0 per cent.

During the decade 1880-90 the growth of the whole country was considerable, yet we find that three *Landestheile* decreased by 1·0, 1·1, and 5·6 per cent. respectively, and in thirteen other *Landestheile* the increase was under 5·0 per cent. whereas all the municipalities except two increased, and in fourteen cases to the extent of upwards of 10·0 per cent. Agram (Zagrab) increased by 33·2, Buda Pest by 36·4, and Fiume by 40·6 per cent. In the two small municipalities which exhibited a decrease it amounted to but 0·2 and 2·1 per cent.

From this it may, I think, be safely inferred that rural depopulation and the agglomeration of people in the great towns are both familiar phenomena in Hungary. Even if we admit that an unusually heavy death-rate is a disturbing factor, we are confronted with the fact of towns growing while rural districts dwindle.

Canada.

Let us turn from the old world to the new. Here at any rate one would not expect to meet with depopulation in any form, least of all rural depopulation. Where land is in superfluous abundance, where rent and landlords are unknown, where every man is his own master, there should be the paradise of the peasant. It might be supposed that in such a place a sturdy yeomanry would go on increasing for many a long year, till the forest and the wilderness should be entirely subjugated—the country fully settled. However, the bulletins of the Canadian census of 1891 tell quite a different tale.

The province of NEW BRUNSWICK consists of fourteen counties; one of these diminished slightly in the decade 1871-81, but no less than seven decreased in the decade 1881-91. New Brunswick contains but one considerable town, St. John, and that also decreased; if this be deducted, we get a total loss in ten years in the rural parts of the seven counties of 11,259, or 8·3 per cent.

The province of NOVA SCOTIA, one of the oldest settled parts of the dominion, contains eighteen counties; these all increased more or less in the decade 1871-81, but at the last census no less than eight of them exhibited a loss of population; no decreasing

county contained any considerable town; together they lost 7,794 inhabitants, or 4·7 per cent. The city of Halifax increased by 6·8 per cent.

The dominion statistician, Mr. George Johnson, accounts for the slow rate of increase of the maritime provinces by (1) the decay of early marriages and increasing tendency to celibacy, resulting in a diminution in the average size of the family; (2) the natural movement westward; and (3) the increasing aversion to agricultural pursuits.

The province of QUEBEC contains sixty-one counties; in the decade 1871-81 a decrease was seen in ten of these, amounting together to 7,280, or 5·4 per cent. In the last decade one of these counties recovered most of its loss, but the rest all continued to decrease, and were joined by seventeen others, making in all twenty-six decreasing counties. They lost together 26,663, or 6·4 per cent. The small towns of Trois Rivières and Lévis are within the decreasing counties, and shared their declines; but Hull and Sherbrooke increased by 63·5 and 39·9 respectively; Quebec indeed gained only 1 per cent., but Montreal, with its suburb of Hochelaga, grew rapidly in both decades, viz., 44·8 and 29·8 per cent., in other words, it more than doubled itself in the twenty years.

New France, though offering a strange contrast to old France, so far as its birth-rate is concerned—for the families of the *habitans* of Quebec have the reputation of being the largest in the world—resembles it in exhibiting, side by side, rapidly growing cities and decreasing rural districts. As is well known, French Canadians supply a large proportion of the mill hands of New England.

So far for French Canada; but how about English Canada, or rather, having regard to the large Scottish element, British Canada?

The province of ONTARIO is divided into forty-eight counties. In the decade 1871-81 only five of these, containing 132,381 persons, decreased in all by 2,423, or 1·8 per cent., but in the decade 1881-91 no less than twenty counties, containing 802,040 inhabitants in 1881, decreased in all by 42,867, or 5·3 per cent. Three counties decreased in both decades.

While large portions of the province were thus declining in population, the chief towns were growing rapidly; thus at the three last censuses we find the following populations:—

Growth of Population in Twenty Years of Five Chief Municipalities in Ontario.

	1871.	1881.	1891.
Kingston.....	12,407	14,091	19,264
London	15,826	26,266	31,977
Ottawa	21,545	31,307	44,154
Hamilton.....	26,716	35,961	48,980
Toronto	56,092	96,196	181,220
Total	132,586	203,821	325,595
Increase, actual numbers	—	71,235	121,774
„ per cent.....	—	53·7	59·7

Ontario, though a new country, sends out many emigrants to Manitoba, to the North West, as well as to the United States.

The Dominion statistician gives several reasons for the decrease of many of the counties:—

(1.) A well intentioned endeavour to minimise the inherent defect of the *de jure* system of enumeration, *i.e.*, its tendency to count persons twice over.

(2.) The movement on the one hand to the cities, on the other further west in search of cheaper land.

(3.) The introduction of labour-saving machinery in agriculture.

(4.) The departure of the lumbermen after the forests have been cut down.

(5.) The attraction of the mining regions of Algoma and Nipissing.

(6.) The decrease in the average size of the family from 5·54 in 1871, to 5·24 in 1881, and to 5·1 in 1891. Mr. Johnson says: “Had the average family of 1891 been as large as that of 1871, “there would have been over 180,000 more of a population in the “province than there is.”

United States.

From Canada one naturally passes southwards to the UNITED STATES, where a not dissimilar spectacle meets our view.

The first thing to strike us is the vast growth of the cities north and south, east and west; the next thing the rapid spread of the people westwards.

The census of 1890 showed an absolute and not inconsiderable decline in one State, Nevada, which lost 16,505 persons, or more than one-fourth of its population, in the ten years. This case is exactly parallel to that of Cornwall, and the direct consequence of the “running out” of the great Comstock lode, and the failure of other mines.

Side by side with the torrential stream of progress, the comparative stagnation presented by the New England States, Vermont, Maine, and New Hampshire, is very clearly shown in Table XXVII. In the bad years of the war period, Maine and New Hampshire actually declined in population, and in several other decades the growth has been actually trifling, in most very small when measured by American standards.

It is however necessary to look a little below the surface. If we take the total increase of population in these three States during the last decade, and from this deduct the increase of all towns which in 1890 had upwards of 8,000 inhabitants,¹⁰ and add for comparison the States of New York, Massachusetts, and Ohio, we get the startling results given in Table XXVIII. The rural population has declined not only in the small States of Vermont and Maine, but in the Empire State itself. Moreover in New Hampshire and Ohio the new town populations have trebled the additions to the rural community, and in the case of Massachusetts have octupled them.

The compendium to the Eleventh Census, Table 2, gives the means of comparing the populations at each enumeration of the numerous counties into which the States and territories are divided. The labour of summing up the populations of the decreasing counties would have been too heavy for me, but I have in Table XXIX given for a great many of the States the number of counties which have declined in population during each of the last four decennia, and have also indicated the number of counties which have decreased more than once.

I believe that I have in every case made allowance for changes of boundaries.

The populations of the counties vary enormously; those which I have noted as decreasing range from 1,000 to 77,000, but these are exceptional numbers; there are few under 5,000 or over 40,000, the greater number lie between the limits of 10,000 and 30,000. To our old fashioned notions it seems strange that a county should disappear entirely, yet more strange that an official footnote should say in an apparently unconcerned manner, "no records by which "to account for its disappearance!" And yet this remark occurs some half-a-dozen times, the defaulting counties having during their existence numbered several thousands of inhabitants. Again we find difficulty in realising that a county may be *vox et preterea nihil*, but this is not far from true of such as return but *seven*, *four*, or even *three* inhabitants. The fact is that in a new country many settlements never get beyond the experimental stage, particularly in mining districts.

¹⁰ Using the figures given in "Bulletin" No. 52, pp. 6—9.

But lest you should think Table XXIX undeserving of your respect, I have excluded both the phantom counties and the uninhabited counties from its scope.

We see that the twenty-seven States dealt with in the table comprised in all 1,933 counties, of which 368 declined in 1880-90, 84 in 1870-80, 359 in 1860-70, and 188 in 1850-60. The great decline in the period during which the civil war occurred will be noted, but in the Southern States the large number of decreasing counties recorded at the census of 1870, was to a considerable extent due to the admitted shortcomings of that enumeration. It will be noted that 218 counties have decreased in two periods or more, 43 in three periods or more, and 7 in all four periods.

Confining our attention mainly to the last decade, we observe that the movement was most marked as regards the North-Eastern States in Vermont, Maine, New Hampshire, and New York; as regards the Central States in Ohio, Illinois, Indiana, and Iowa; as regards the Southern States in Virginia, Kentucky, and Tennessee; as regards the Western States in Nevada.

The absolute amount of the loss of inhabitants is in many cases small, but *a priori* we should scarcely have expected to find any.

"The State returns show that large numbers of New England farms have been abandoned, either because the soil was naturally poor, or exhausted by an improvident system of tillage, or because the farms were inconveniently situated far away among the hills. Thus it happens that much of the soil of New England has passed out of cultivation, the former cultivators having either gone into the great cities or migrated to the fertile soils of the western prairies."¹¹

A map published in the first "Extra Census Bulletin" shows very clearly what a wide area of the United States has been affected by depopulation.

Australia.

I will ask you now to take another long journey, and see what is going on in our Southern Colonies. The census of 1881 showed that of the sixteen counties into which Victoria was then divided, six had lost population to the extent of 45,174, or 16.6 per cent. The census of 1891 showed that five counties (three of which had also declined during 1871-81) had together lost 12,164, or 5.3 per cent. It is pretty well known that during the same ten years the city of Melbourne with its suburbs has reached the enormous figure of 488,999 inhabitants, having grown by 72.6 per cent., so that it now comprises within its ten-mile radius no less than two-fifths of the whole population of the colony!

¹¹ "Dictionary of Political Economy," article *Depopulation*, p. 558.

It is therefore pretty evident that something of the same kind of movement has commenced even in such a young country as Victoria.

If there be no direct evidence of rural depopulation in New South Wales, we should note that its capital, Sydney, is growing half as rapidly again as the whole colony.

Conclusion.

Now to what point has our survey brought us? There is one proposition to which I think everyone will assent, viz.: For the last forty years in every country throughout the world, new and old alike, the towns, and especially the large towns, have increased in population more rapidly than the rest of the country.

I have set before you evidence which proves this conclusively as regards the several parts of the United Kingdom; also that on the continent of Europe it is true of France, Germany, Norway, Austria, Hungary, Switzerland, Italy, and Spain—I might easily have added Belgium, Holland and Sweden. I have also shown that it is equally true of Canada, the United States, Victoria, and New South Wales. Without quoting the figures, I may add that it holds good of Argentina and Uruguay.

Additional evidence, if required, can be found in the valuable papers on the "Laws of Migration," by our colleague, Mr. Ravenstein,¹² and in my "Studies in Statistics" (p. 156), but it will probably be accepted as a general proposition.

Further than this, I have shown that the movement of the people from the peaceful farmstead or the sleepy village to the busy go-head town, which is implied in this rapid growth of the towns, has in many cases gone much further. Not only has the increase of the rural population been drafted off to recruit the armies of urban industry, but the peasantry has been further drawn upon so as to result in an actual diminution of its numbers, when the population counted at a recent census is compared with that of ten, twenty, or thirty years previously. Such diminution, or depopulation, has been in the case of Ireland general, but a depopulation like in kind, if very different in degree, has occurred in France, in Scotland, in Wales; to a somewhat less degree in England. It is a fact to be reckoned with in Norway, in Italy, in Switzerland, in Spain, in Austria, and in Hungary. It is much less obvious, but yet existent, in Germany. So much for Europe; but it is not confined to Europe. Rural depopulation is obvious enough in Canada, and in the northern and older settled States of the American Union, and there are traces of it in Australia.

¹² *Journal of the Royal Statistical Society*, vol. xlviii, 1885, p. 167, and vol. lii, 1889, p. 241.

But if rural depopulation be very general in its extent, the figures that I have quoted show that its intensity has been greatly exaggerated; in the few spots where it is at its worst, it only amounts to a thinning of the people such as should be viewed with reasonable equanimity. Dr. Ogle's valuable paper¹³ makes this very clear, and throws much light on many phases of the problem.

Now comes the great question: What is the cause of this widespread phenomenon?

Is it a faulty system of government? If it be, then it is not peculiar to any one system, since it is more prevalent under republican institutions than under military absolutism, and is as bad under the constitutional monarchy of this country.

Is it a bad system of land tenure? This query may be met by another: Does the land system of England resemble that of France? Does the system prevalent in the United States, in Canada, in Australia, resemble any of the systems prevalent in Europe? I would not venture to affirm that systems of land tenure are without influence in the matter, that is inconceivable, but I do affirm, and that most strongly, that it cannot be the main, the dominant cause of rural depopulation.

Is it free trade? In a sense, yes; but yet it is compatible with most rigid protection.

Bear in mind that the causes, whatever they may be, affect alike Celt and Anglo-Saxon, Teuton, Latin, and Magyar. That their operation has the same result upon Frenchmen on the Loire and on the St. Lawrence; upon Prussians in Ohio and in Pomerania; upon Cornishmen in Cornwall and in Nevada. From the North Cape to the Apennines, from the bogs of Galway to the waving cornfields of Hungary the causes are at work; they are equally at work from the heights of Quebec to the Gulf of Mexico, and from Chesapeake Bay to Sacramento—a message comes from the Antipodes to say that even young Victoria is beginning to enter upon like experiences.

Self-governing colonies, republics in both hemispheres, as well as monarchies, new and old, constitutional and despotic, all tell the same tale.

Freeholds and leaseholds are alike affected, large holdings and small; the peasant proprietor of France on his much treasured scraps of land feels the impulse, whatever it may be, no less strongly than the yeoman of Ontario, of New England, of Illinois, or of Victoria. The Irishman crying out for land crosses the Atlantic, and is to be found, where? In the backwoods? On the

¹³ "The Alleged Depopulation of the Rural Districts of England," *Journal of the Royal Statistical Society*, vol. lii, p. 205.

prairies? No; far more often in the crowded cities of the eastern States.

The cause, or causes, whatever they may be, must then fit in with these seemingly incongruous facts, unless indeed we are to take up a somewhat impotent position, and say that each case must be dealt with separately, and without regard to its bearing on others.

What then is the cause? For my own part I have little hesitation in replying.

In primis there can be no doubt that many causes contribute their quota, and it may well be that in each locality some one of these contributory causes, which is usually quite subordinate in importance, may, owing to the special circumstances of the country or district, become so important as even to be predominant. Further, I freely admit that the many contributing causes act and re-act upon one another, so as to produce a *nexus*, which is in many instances far from easy to unravel.

With these reservations I shall state boldly that I believe the main causes to be two, of which the one may be termed *sentimental*, the other *economic*.

(1.) Whatever poets may have said of the pleasures of the country, whatever country squires may say in praise of turf or turnips, burn or moor, with whatever glee the jaded merchant or banker may rush off to the woods of Surrey or the dales of Cumberland, there can I think be no manner of doubt about the feelings of the great mass of the population. To them the country does not suggest pleasure, but the lack of it. The dream of the countryman is to get away from the country, just as it is the dream of many townsmen to get away from the town. Change naturally enough is attractive to us all, but whereas it is almost the rule for the rustic to wish to go to a town, it is comparatively exceptional for the townsman to wish to leave one.

An excellent account of the many circumstances which have contributed to create this restless spirit in our country villages, will be found in Mr. Anderson Graham's book, a work which is characterised by a singularly fair and sympathetic treatment throughout.¹⁴

I believe this, which I have called the sentimental cause, to lie at the very root of the matter, but it is, all said and done, of the nature of what medical men term *predisposing causes*; we have now to consider the *exciting cause*.

(2.) This, which I believe will be found in some form or another to underlie those various contributory causes—which, in

¹⁴ "The Rural Exodus." By P. Anderson Graham. Methuen and Co., 1892.

one case and another, may be so much more *en évidence* as to seem at first sight to be the chief cause—has many forms, and acts in many ways. It may be summed up in the phrase *improved communications*.

See what this implies. In the first place, the man who wants to go finds the means of transit. In the last century locomotion was slow, inconvenient, and expensive. It is now rapid, handy, and cheap. Improved communications include cheap postage and cheap telegraphs, which render possible a cheap press. These in their turn have had much to do with the spread of education. The press and the post put the village in communication with the town, the factory, the mine, the colonies. Men learn where there is a demand for labour, and are directed to it. Improved communications lead to the centralisation of industry; this in its turn lessens the demand for artisans in the country, while it increases the demand for them in the towns. Many things formerly made in the village, agricultural implements, waggons, gates, and fencing, even such small things as tools and hinges, are now more often bought in the market town than made in the village smithy; but even the market town does not make these things, but gets them in turn from the manufacturers in larger towns. If the village carpenter and smith have less to do, it is the same with the keeper of the village shop. Mr. Anderson Graham has called attention to the extinction of the village tailor consequent upon the wholesale manufacture of made up clothing. Northampton and other towns have exterminated the village cobbler in like manner. These are by comparison minor matters. The great improvement in agricultural implements, and the enormous saving of labour by their general adoption, is intimately connected with improved communications, and could hardly have originated under the old *régime*. Mr. Daniel Pidgeon, in a most interesting paper contributed to the Royal Agricultural Society,¹⁵ entitled the "Development of Agricultural Machinery," tells us how much is owing to the mere bringing together of agriculturists and mechanicians at the meetings of the Society, *i.e.*, to improved communications making such meetings possible. This improvement began about 1841, and by 1861 (taking the census years as being familiar landmarks) the reaper was taking its place as a practical machine, and many improvements in turnip-cutters, threshing-machines, &c., were made before and since, till now the flail and the reaping hook must be acquiring a value among *bric-à-brac* dealers as relics of a bygone age.

Mr. Pidgeon has called my attention to the great influence on the rural population of the suppression of the hand loom by the

¹⁵ "Journal of the Royal Agricultural Society of England," 1890, p. 257.

power loom, which occurred about the period 1830-42. In days gone-by spinning and weaving were important village industries.

But even this is not the most important influence which the changed conditions of locomotion have brought about. Time was when it was necessary that every country should produce its food within its borders; if there were not enough good land suitable for growing crops, well, bad and unsuitable land must be broken up, that was the long and short of it, beggars could not be choosers. That is the point; now we are no longer beggars, and we can choose; what is more we do choose. Whatever our fathers and grandfathers did, why should we be restrained? If more corn is wanted we can buy it in Egypt, or Russia, or Hungary. But why should we buy? We will not; nothing prevents us from going to Ohio, to Indiana, to Illinois; let us go then. But why stop there? If the land be better, let us go on to Minnesota by all means, or even to Dakota. It is but a little further, and we shall have the advantage, even if it be but a sentimental one (though I do not admit it) of remaining under the old flag—let us go further and sail to Manitoba, to the great Canadian North West. Our pastures are deficient, there are boundless sheep runs among the gum-trees of New South Wales, and cattle ranches in Alberta among the beautiful foot-hills of the Rocky Mountains. Freight is now practically of no account. Distance is reduced to its lowest terms, and we have made great inroads upon old Father Time himself.

Reduced to a sentence, what does this mean? It means that the dream of the free-trader is being fast realised. That we are more and more learning to do in each place that for which each place is most advantageously circumstanced. Improved means of communication, communication of persons, of things, of information—the locomotive and the steamship, the telegraph and the penny post make this practicable. Other mechanical improvements enable the greatest quantity of stuff to be produced by the smallest possible amount of labour. This is applicable to agriculture as to other things. Given that the growing sentiment of the mass of civilised mankind—by civilised I mean according to western ideas—is averse to agriculture as a pursuit, and it follows as a necessary consequence that no more men and women will remain attached to the soil than are absolutely required in each place for its cultivation in the way found to be most remunerative for that place.

Is this migration from country to town a thing to be rejoiced over, or the reverse? I have never heard but one answer. All are more or less conscious that the country life is more natural, and hence more desirable than the town life. We all have some poetry

in our constitutions, though it often fails to come to the surface. Apart however from all sentimental considerations, there are others of such a practical character as to admit of measurement, which may hence be termed scientific. That the town life is not as healthy as the country life is a proposition that cannot be contradicted. The great advances of preventive medicine in the last fifty years have indeed done so much to remove the grosser evils of the towns, and have had such obvious results in the lowering of the death-rate, that many persons are led to draw the inference that further progress may tend to make the urban standard of health nearly as high as the rural. Length of life is however not everything, the quality of life must be considered as well as its quantity. The narrow chest, the pale face, the weak eyes and bad teeth of the town-bred child are but too often apparent. It is easy to take an exaggerated view either way, but the broad facts are evident enough, long life in towns is accompanied by more or less degeneration of race. The great military powers of the continent know this well enough, and it may be surmised that with them agricultural protection is but a device to keep up the supply of country-bred recruits.

My object in writing this paper was to set out facts, not to propound theories, so that I shall say no more on this point, but must add a few words as to remedies. No remedy that I have ever read of, and no combination of them that I can conceive, will have, in my humble opinion, any appreciable effect. If my explanation of the facts be at all a close approximation to the truth, it is not a question of remedies, but rather of readjustment. If we are destined to be for the most part a people dwelling in cities, we must accept the fact, and we must make the best of it.

The general lines on which the readjustment must be made are now becoming fairly clear. The special necessities of which the townsman is apt to get less than his due share are fresh air and bodily exercise. The special evils to which he is now subjected are want of space in and about his dwelling, and too long confinement in ill ventilated schools, workshops, or even places of amusement. The public is so fully alive now to the importance of the water question and the drainage question, that the fear is rather that these should force other questions into the background. One of the very best signs of true progress in recent times has been the sudden outburst of enthusiasm for open spaces; I trust that it will receive no check, but that the demand will become, like the necessity, more and more imperative. Associated with this we must foster the love of athleticism; but such abundant facilities must be afforded, that the form it takes should be that of the general public itself partaking in sports and pastimes, rather than

the unhealthy form of professional athleticism with its concomitant evils of betting and gambling. Much greater attention should be paid to the question of ventilation in buildings of all sorts.

Wherever the necessities of a trade compel the crowding together of operatives in an atmosphere more or less vitiated, the hours of labour should be shortened, or frequent "breaks" in the working time be allowed. The out-door labourer will not suffer seriously from long hours; it is, on the contrary, the clerk, the compositor, the tailor, the sempstress, who need protection in this matter.

One of the greatest defects in our municipal government, at any rate here in London, is that we allow houses to be crowded together in a way that is incompatible with the health of their inmates; and the danger increases as the practice of erecting buildings to a greater and ever greater height is becoming so prevalent. I have great hopes that a Bill to amend the building laws of the metropolis, which is now being prepared, and will be introduced into Parliament in the next session, will effect much in this direction.

In somewhat summarily dismissing a number of remedies that have been suggested to cure the widely prevalent evil of rural depopulation, I must not be understood to condemn all such proposals; many of them may perhaps be worth trying on their merits, but what I do wish to lay stress upon is this, that those well meaning persons who pin their faith upon these reforms as likely to stop the progress of rural depopulation, are not likely to meet with anything but disappointment. A movement in the reverse direction may come in time, but it will be as the result of the operation of the law of supply and demand, and its time will not be until the supply of unoccupied land approaches to exhaustion. Mr. Giffen has told us that this time is not very far off; but be that as it may, when that state of affairs is reached, a further readjustment will be inevitable; much additional labour will have to be applied to the land with a view to making the soil produce its utmost.

APPENDIX.¹⁶TABLE I.—*Loss of Population recorded at each successive Census in certain English and Welsh Counties.*

	1851.	1861.	1871.	1881.	1891.	Gross Total Loss.
Wiltshire	2,059	4,910	—	—	—	6,969
Cambridge	—	9,372	—	1,312	—	10,684
Norfolk	—	7,916	—	—	—	7,916
Rutland	—	1,122	—	639	775	2,536
Suffolk	—	145	—	—	—	145
Cornwall	—	—	7,047	31,657	8,097	46,801
Huntingdon	—	—	542	4,217	1,719	6,478
Dorset	—	—	—	4,746	—	4,746
Hereford	—	—	—	4,308	5,263	9,571
Shropshire	—	—	—	97	11,698	11,795
Westmorland	—	—	—	819	—	819
ENGLAND	2,059	23,465	7,589	47,795	27,552	108,460
Merioneth	489	—	—	—	2,763	3,252
Montgomery	2,272	416	—	1,905	7,707	12,300
Radnor	742	—	—	1,902	1,737	4,381
Anglesey	—	2,718	3,569	—	1,337	7,624
Brecknock	—	—	1,726	2,155	715	4,596
Pembroke	—	—	4,280	174	2,699	7,153
Cardigan	—	—	—	3,171	7,674	10,845
Carnarvon	—	—	—	—	1,124	1,124
Flint	—	—	—	—	3,252	3,252
WALES	3,503	3,134	9,575	9,307	29,008	54,527

Note.—During the last half century the population of England has increased by 12,479,661, that of Wales by 607,209.

¹⁶ Although I have in a few cases availed myself of the “Statesman’s Year Book,” by far the greater part of my *data* are derived directly from official reports of the several countries.

TABLE II.—*Loss of Population PER CENT. recorded at each successive Census in certain English and Welsh Counties.*

N.B.—The percentage is in each case calculated upon the population as enumerated at the census last before the decrease set in. — denotes decrease ; + denotes increase.

	1851.	1861.	1871.	1881.	1891.	
Wiltshire	—0·8	—1·9	+3·1	+0·7	+2·3	+3·4 since 1841
Cambridge	—5·1	+5·9	—0·7	+1·7	+1·9 „ '51
Norfolk	—1·8	+0·9	+1·4	+2·7	+3·1 „ „
Rutland	—4·9	+0·9	—2·8	—3·4	—10·1 „ „
Suffolk	—0·04	+3·5	+2·4	+3·7	+9·5 „ „
Cornwall	—1·9	—8·6	—2·2	—10·1 „ 1861
Huntingdon	—0·8	—6·6	—2·7	—12·7 „ „
Dorset	—2·4	+1·8	—0·7 „ 1871
Hereford	—3·4	—4·2	—7·5 „ „
Shropshire	—0·04	—4·7	—4·8 „ „
Westmorland	—1·3	+2·9	+1·7 „ „
Merioneth	—1·2	+0·3	+19·2	+13·8	—7·0	+25·1 „ 1841
Montgomery	—3·3	—0·6	+1·0	—2·7	—11·1	—16·7 „ „
Radnor	—2·9	+2·6	+0·1	—7·5	—6·8	—14·4 „ „
Anglesey	—4·7	—6·2	+0·7	—2·3	—12·6 „ 1851
Brecknock	—2·8	—3·5	—1·2	—7·5 „ '61
Pembroke	—4·4	—0·2	—2·8	—7·4 „ „
Cardigan	—4·3	—10·4	—14·8 „ 1871
Carnarvon	—0·9	—0·9 „ '81
Flint	—4·0	—4·0 „ „

TABLE III.—*ENGLAND AND WALES, Registration Divisions. Decrease of certain Rural Districts in the Two Decades 1871-81 and 1881-91.*

	Population, 1871.	Decrease, 1871-81.		Population, 1881.	Decrease, 1881-91.	
		Absolute.	Per Cent.		Absolute.	Per Cent.
II. South Eastern	312,279	— 6,369	—2·0	305,387	— 3,546	— 1·2
III. South Midland	668,753	— 29,294	—4·4	639,825	— 8,731	— 1·4
IV. Eastern	666,026	— 24,422	—3·7	644,641	— 10,995	— 1·7
V. South Western	1,173,111	— 77,007	—6·6	1,096,884	— 28,007	— 2·6
VI. West Midland	598,135	— 15,803	—2·6	581,623	— 16,975	— 2·9
VII. North Midland	345,028	— 9,212	—2·7	335,948	— 17,861	— 5·3
VIII. North Western	91,070	+ 3,112	+3·4	94,162	— 2,198	— 2·3
IX. York	321,726	— 4,757	—1·5	316,956	— 18,724	— 5·9
X. Northern	185,756	— 6,813	—3·7	178,577	— 10,895	— 6·1
XI. Welsh	671,138	+ 8,853	+1·3	679,923	— 42,213	— 6·2
ENGLAND AND WALES	5,033,022	—161,712	—3·2	4,873,926	—160,145	—3·3

TABLE IV.—ENGLAND AND WALES, *Registration Counties. Decrease of certain Rural Districts in the Two Decades 1871-81 and 1881-91.*

	Popula- tion, 1871.	Decrease, 1871-81.		Popula- tion, 1881.	Decrease, 1881-91.	
		Absolute.	Per Cent.		Absolute.	Per Cent.
Kent	57,488	- 1,009	- 1·8	56,470	- 829	- 1·5
Sussex	62,623	+ 505	+ 0·8	63,140	- 1,990	- 3·2
Hampshire	105,237	- 2,419	- 2·3	102,554	+ 1,073	+ 1·0
Berkshire	86,931	- 3,446	- 4·0	83,223	- 1,800	- 2·2
Hertford	90,162	- 1,683	- 1·9	88,479	- 1,052	- 1·2
Buckingham	91,713	- 3,843	- 4·2	87,774	+ 3,144	+ 3·6
Oxford	119,787	- 4,890	- 4·1	115,194	- 2,234	- 1·9
Northampton	99,444	- 2,983	- 3·0	96,426	- 4,930	- 5·1
Huntingdon	58,031	- 4,808	- 8·3	53,223	- 2,933	- 5·5
Bedford	75,609	- 3,782	- 5·0	71,852	- 2,162	- 3·0
Cambridge	134,007	- 7,305	- 5·5	126,877	+ 1,436	+ 1·1
Essex	180,811	- 9,371	- 5·2	171,437	- 1,647	- 1·0
Suffolk	221,578	- 11,143	- 5·0	210,119	- 4,130	- 2·0
Norfolk	263,637	- 3,908	- 1·5	263,085	- 5,218	- 2·0
Wiltshire	184,277	- 9,453	- 5·1	174,945	- 5,909	- 3·4
Dorset	143,005	- 8,757	- 6·1	134,236	- 3,698	- 2·8
Devon	225,919	- 15,229	- 6·7	210,451	- 7,203	- 3·4
Cornwall	358,356	- 31,981	- 8·9	326,511	- 7,910	- 2·4
Somerset	261,554	- 11,587	- 4·4	250,741	- 3,287	- 1·3
Gloucester	163,850	- 6,008	- 3·7	157,635	- 5,292	- 3·4
Hereford	121,985	- 3,838	- 3·2	117,988	- 4,597	- 3·9
Shropshire	157,527	- 2,978	- 1·9	154,676	- 5,833	- 3·8
Stafford	14,325	- 252	- 1·8	14,103	+ 513	+ 3·6
Worcester	77,277	- 1,233	- 1·6	75,544	+ 77	+ 0·1
Warwick	63,171	- 1,494	- 2·4	61,677	- 1,843	- 3·0
Leicester	14,257	- 901	- 6·3	13,370	- 980	- 7·3
Rutland	23,385	- 378	- 1·6	23,007	- 884	- 3·8
Lincoln	232,825	- 4,972	- 2·1	227,853	- 13,531	- 5·8
Nottingham	54,005	- 2,400	- 4·4	51,605	- 2,283	- 4·4
Derby	20,556	- 561	- 2·7	20,113	- 183	- 0·9
Chester	68,783	+ 2,621	+ 3·8	71,404	- 1,090	- 1·5
Lancaster	22,287	+ 491	+ 2·2	22,758	- 1,108	- 4·9
W. York	93,042	- 1,582	- 1·7	91,447	- 4,351	- 4·8
E. „	68,349	- 981	- 1·4	67,368	- 3,391	- 5·0
N. „	160,335	- 2,194	- 1·4	158,141	- 10,982	- 6·9
Durham	19,155	- 1,613	- 8·4	17,542	- 1,455	- 8·3
Northumberland	93,123	- 601	- 0·7	92,147	- 4,883	- 5·3
Cumberland	48,293	- 2,154	- 4·5	46,148	- 3,253	- 7·1
Westmorland	25,185	- 2,445	- 9·7	22,740	- 1,304	- 5·7
Monmouth	31,598	- 1,258	- 4·0	30,312	- 2,031	- 6·7
Glamorgan	9,290	+ 1,812	+ 19·5	11,102	- 76	- 0·8
Carmarthen	48,145	- 305	- 0·6	47,840	- 2,081	- 4·4
Pembroke	54,812	- 1,480	- 2·7	53,332	- 2,613	- 4·9
Cardigan	79,051	- 2,928	- 3·7	76,123	- 8,882	- 11·7
Brecknock	56,932	- 2,792	- 4·9	54,140	- 1,276	- 2·4
Radnor	19,754	- 1,231	- 6·2	18,523	- 1,404	- 7·6
Montgomery	78,400	- 2,204	- 2·8	76,197	- 8,900	- 11·7
Flint	43,517	+ 2,257	+ 5·2	45,774	- 3,209	- 7·0
Denbigh	56,327	+ 1,455	+ 2·6	57,782	- 2,889	- 5·0
Merioneth	61,507	+ 6,771	+ 11·0	68,237	- 3,512	- 5·2
Carnarvon	96,678	+ 8,742	+ 9·0	105,439	- 4,421	- 4·2
Anglesey	35,127	+ 14	...	35,122	- 912	- 2·6

TABLE V.—ENGLAND AND WALES, *Registration Counties. Decrease of certain Rural Districts in the Twenty Years 1871-91.*

	Decrease.			Decrease.	
	Absolute.	Per Cent.		Absolute.	Per Cent.
Durham	3,068	16·0	Warwick	3,337	5·3
Westmorland	3,749	14·9	Cambridge	5,869	4·2
Huntingdon	7,741	13·3	Norfolk	9,126	3·5
Leicester	1,867	13·1	Kent	1,838	3·2
Cumberland	5,308	11·2	Derby	626	3·1
Cornwall	39,891	11·1	Hertford	2,735	3·0
Monmouth	3,317	10·5	Lancaster	637	2·9
Devon	22,432	10·0	Sussex	1,485	2·3
Dorset	12,455	8·7	Worcester	656	2·1
Nottingham	4,683	8·7	Hampshire	1,346	1·5
Wiltshire	15,362	8·3	Buckingham	699	0·9
North York	13,176	8·2	Stafford*	+ 291	+ 2·0
Northampton	7,913	8·0	Chester*	+ 1,531	+ 2·2
Lincoln	18,503	7·9			
Bedford	5,944	7·8			
Suffolk	15,273	7·0	Cardigan	11,810	14·9
Gloucester	11,507	7·0	Montgomery	11,110	14·2
Hereford	8,594	7·0	Radnor	2,635	13·3
West York	5,946	6·4	Pembroke	4,093	7·5
East York	4,372	6·4	Brecknock	4,068	7·1
Northumberland ..	5,859	6·3	Carmarthen	2,386	5·0
Berkshire	5,246	6·3	Anglesey	917	2·6
Essex	11,018	6·1	Denbigh	1,434	2·5
Oxford	7,124	5·7	Flint	952	2·2
Shropshire	8,684	5·5	Carnarvon*	+ 4,340	+ 4·4
Somerset	14,874	5·4	Merioneth*	+ 3,218	+ 5·2
Rutland	1,262	5·4	Glamorgan*	+ 1,736	+ 18·6

* Increase.

TABLE VI.—ENGLAND AND WALES, *Registration Counties.* Arranged in the order of Increase or Decrease since 1851; also in the order of their Density in 1851.

	Increase or Decrease per Cent., 1851-91.		Persons to Square Mile in 1851.
Radnor	- 22	Radnor	65
Huntingdon	- 17	Merioneth	70
Anglesey	- 14	Westmorland	77
Montgomery	- 13	Brecknock	85
Cardigan	- 12	Montgomery	87
Cornwall	- 11	North York	97
Brecknock	- 11	Cardigan	105
Rutland	- 9	Carmarthen	122
Pembroke	- 3	Cumberland	125
Cambridge	+ 2	Rutland	144
Salop	2	Lincoln	147
Norfolk	3	Pembroke	148
Flint	4	Hereford	149
Hereford	4	Northumberland	156
Wilts	6	Denbigh	166
Dorset	7	Salop	173
Suffolk	9	Carnarvon	178
Oxon	11	Dorset	184
Devon	11	Huntingdon	188
Somerset	12	Wilts	198
Westmorland	13	Anglesey	199
Bucks	14	Norfolk	213
Lincoln	17	Devon	214
Denbigh	23	Cambridge	215
Hertford	24	Northampton	216
Carmarthen	25	East York	223
Merioneth	26	Essex	224
Bedford	28	Berks	226
Carnarvon	28	Oxon	227
Gloucester	31	Bucks	228
Berks	35	Sussex	229
Cumberland	36	Suffolk	231
Northampton	44	Hants	243
Metropolitan Middlesex	54	Glamorgan	253
Monmouth	55	Cornwall	259
East York	59	Hertford	260
Leicester	61	Monmouth	262
Sussex	63	Extra-met. Surrey	272
Worcester	63	Bedford	272
Extra-met. Kent	66	Leicester	283
Hants	66	Somerset	289
Derby	66	Flint	294
Warwick	67	Derby	299
Northumberland	67	Extra-met. Kent	306
Chester	68	Nottingham	314
Nottingham	72	Durham	349
Stafford	75	Gloucester	375
West York	83	Worcester	381
North „	83	Chester	391
Lancaster	91	Warwick	501
Essex	121	West York	508
Metropolitan Surrey	140	Stafford	534
Durham	149	Extra-met. Middlesex	546
Metropolitan Kent	174	Lancaster	1,003
Extra-met. Surrey	182	Metropolitan Kent	3,802
Glamorgan	189	„ Surrey	13,453
Extra-met. Middlesex	282	„ Middlesex	34,389
England and Wales	61.8	England and Wales	285

TABLE VII.—ENGLAND. *Loss of Population in certain Rural Districts of Three Eastern Corn-growing Counties in Forty Years.*

	Population.		Decrease.	
	1851.	1891.	Absolute.	Per Cent.
<i>Essex—</i>				
Halstead	19,253	16,869	2,384	12·4
Braintree*.....	17,561	16,263	1,298	7·4
Dunmow	20,526	16,674	3,852	18·8
Saffron Walden	20,716	17,958	2,758	13·3
<i>Suffolk—</i>				
Cosford (Hadleigh) ...	18,125	15,583	2,542	14·0
Thingoe.....	19,027	15,743	3,284	17·3
Mildenhall	10,354	8,559	1,795	17·3
Hartismere	19,028	14,691	4,337	22·8
Hoxne	15,649	11,461	4,188	26·8
Bosmere	17,219	15,045	2,174	12·6
Blything	27,883	25,394	2,489	8·9
<i>Norfolk—</i>				
Tunstead (Smallburgh)* ...	15,614	13,956	1,658	10·6
Aylsham	20,007	17,452	2,555	12·8
Depwade	26,556	23,293	3,263	12·3
Guiltcross	12,744	10,228	2,516	19·7
Wayland	12,141	10,505	1,636	13·5
Mitford.....	29,389	26,311	3,078	10·5
Walsingham*	22,178	19,600	2,578	11·6
Swaffham	14,320	12,393	1,927	13·5
Thetford	19,022	17,253	1,769	9·3
Total, twenty districts.....	377,312	325,231	52,081	13·8

* In each of these cases adjustments have been made for changes in the area of the district.

TABLE VIII.—ENGLAND. *Loss of Population in certain Rural Districts of Four South-Western Grazing Counties, in Fifty Years.*

	Populations.		Decrease in Fifty Years.	
	1841.	1891.	Absolute.	Per Cent.
Dorset—				
Beaminster	15,112	10,366	4,746	31·4
Devon—				
Honiton	23,892	20,522	3,370	14·1
Crediton	22,035	17,104	4,931	22·4
South Molton*	20,982	15,140	5,842	27·8
Torrington	18,187	13,643	4,544	25·0
Holsworthy*	12,353	9,342	3,011	24·4
Wilts—				
Westbury	13,400	10,166	3,234	24·1
Warminster	17,109	13,032	4,077	23·8
Somerset—				
Shepton Mallet	17,645	15,560	2,085	11·8
Total of nine districts	160,715	124,875	35,840	22·3

TABLE IX.—ENGLAND. *Loss of Population in certain Rural Districts of Four South-Western Grazing Counties, in Forty Years.*

	Populations.		Decrease in Forty Years.	
	1851.	1891.	Absolute.	Per Cent.
Dorset—				
Blandford	14,837	13,359	1,478	10·0
Bridport	16,866	14,038	2,828	16·8
Devon—				
Tiverton*	33,540	28,938	4,602	13·7
Wilts—				
Devizes	22,236	19,744	2,492	11·2
Pewsey*	12,503	10,488	2,015	16·1
Amesbury	8,250	6,888	1,362	16·5
Somerset—				
Layport	18,567	14,478	4,089	22·0
Total of seven districts	126,799	107,933	18,866	14·9

* In each of these cases adjustments have been made for changes in the area of the district.

TABLE X.—SCOTLAND. *Numbers and Proportions of People in Towns, Villages, and Rural Districts at last Three Censuses.*

	Absolute Numbers.			Percentages.		
	1871.	1881.	1891.	1871.	1881.	1891.
Towns	1,951,704	2,306,852	2,631,298	58·1	61·7	65·4
Villages	386,993	447,884	465,836	11·5	12·0	11·6
Rural districts	1,021,321	980,837	928,513	30·4	26·3	23·0
Scotland	3,360,018	3,735,573	4,025,647	100·0	100·0	100·0

TABLE XI.—SCOTLAND. *Increase or Decrease of Population in last Two Decennia.*

	Absolute.		Per Cent.	
	1871-81.	1881-91.	1871-81.	1881-91.
Towns	+ 355,148	+ 324,446	+ 18·2	+ 14·1
Villages.....	+ 60,891	+ 17,952	+ 15·7	+ 4·0
Rural districts	— 40,484	— 52,324	— 4·0	— 5·3
Scotland	+ 375,555	+ 290,074	+ 11·2	+ 7·8

TABLE XII.—*Decrease of Population in certain Counties of SCOTLAND. Populations at the Time of Maximum compared with those of 1891.*

County.	Year of Maximum Population.	Population.		Decrease from Maximum.		Nine Principal Towns of Scotland.
		Maximum.	1891.	Absolute.	Per Cent.	
Shetland	1861	31,670	28,711	2,959	9·3	
Orkney	'61	32,395	30,453	1,942	6·0	
Caithness	'61	41,111	37,177	3,934	9·6	
Sutherland	'51	25,793	21,896	3,897	15·1	
Ross and Cromarty	'51	82,707	77,810	4,897	5·9	
Inverness	'41	97,799	89,317	8,482	8·7	
Nairn	'81	10,455	10,019	436	4·2	
Elgin	'81	43,788	43,453	335	0·8	
Banff	1891	64,190	64,190	—	—	
Aberdeen	'91	281,332	281,332	—	—	Aberdeen
Kincardine	'91	35,647	35,647	—	—	
Forfar	'91	277,773	277,773	—	—	Dundee
Perth	1831	142,166	126,199	15,967	11·2	Perth
Fife	1891	187,346	187,346	—	—	
Kinross	1831	9,072	6,280	2,792	30·8	
Clackmannan	1891	28,432	28,432	—	—	
Stirling	'91	125,608	125,608	—	—	
Dumbarton.....	'91	94,495	94,495	—	—	
Argyll	1831	100,973	75,003	25,970	25·7	
Bute	1891	18,404	18,404	—	—	
Renfrew	'91	290,798	290,798	—	—	Greenock, Paisley
Ayr	'91	226,283	226,283	—	—	Kilmarnock
Lanark	'91	1,046,040	1,046,040	—	—	Glasgow
Linlithgow	'91	52,808	52,808	—	—	
Edinburgh	'91	434,159	434,159	—	—	Edinburgh, Leith
Haddington	1881	38,502	37,485	1,017	2·6	
Berwick	'61	36,613	32,406	4,207	11·5	
Peebles	1891	14,761	14,761	—	—	
Selkirk	'91	27,353	27,353	—	—	
Roxburgh	1861	54,119	53,741	378	0·7	
Dumfries	'51	78,123	74,221	3,902	5·0	
Kirkcudbright	'51	43,121	39,985	3,136	7·3	
Wigtown.....	'51	43,389	36,062	7,327	16·9	
Total of decreasing counties....	—	911,796	820,218	91,578	10·0	

TABLE XIII.—SCOTLAND. *Deer Forests and Lands exclusively devoted to Sport.*

County.	Acreage Existing prior to 1883.	Acreage Formed since 1882.	Total Acreage.
Aberdeen	174,260	—	174,260
Argyll	193,145	22,153	215,298
Banff	65,000	—	65,000
Bute	3,300 ? *	? *	3,300
Caithness	38,500	—	38,500
Forfar	61,660	—	61,660
Inverness	755,535 ? *	146,246 ? *	901,781
Perth	82,357	—	82,357
Ross and Cromarty	751,588	60,731	812,319
Sutherland	166,808	45,850	212,658
SCOTLAND	2,292,153	274,980	2,567,133

* The forest in Bute and five of those in Inverness have been added to subsequently to 1883, but the precise amounts so added are not given in the return.

TABLE XIV.—SCOTLAND. *Deer Forests and Sporting Lands in which the present Sporting Rent is less than the former Agricultural Rent.*

Acreage.	Old Rent.	Sporting Rent.	Diminution per Cent.
	£	£	
10,153	675	448	34
15,000	276	200	28
32,460	942	700	26
12,000	749	600	20
45,000	435	350	20
22,500	900	750	17
10,800	336	300	11
16,000	600	550	8
35,050	835	800	4
Total 198,963	5,748	4,698	18

TABLE XV.—SCOTLAND. *Deer Forests and Lands devoted exclusively to Sport. Rents per Acre before Afforestation, and approximate Acreage at each Rental.*

Rent per Acre, in Pence.	Approximate Acreage.
Nil	80,000
$\frac{1}{2}d.$ — $1\frac{1}{2}d.$	150,000
2d. — $2\frac{1}{2}d.$	125,000
3d. — $4\frac{1}{2}d.$	218,000
5d. — $7\frac{1}{2}d.$	397,000
9d. — 11d.	190,000
12d. — 20d.	88,000
Total	1,240,000

TABLE XVI.—SCOTLAND. *Persons to the Square Mile, and Females to 100 Males.*

	1851.	1891.	Remarks.	Females to 100 Males.
Sutherland	13	11	Decreasing since 1851.....	111
Inverness	24	22	„ „ '41.....	107
Ross and Cromarty	27	25	„ „ '51.....	111
Argyll	28	23	„ „ '31.....	104
Peebles	30	42	{ Decreased 1831-41; has in- creased since	114
Selkirk	38	106	—	115
Kircudbright	48	45	Decreasing since 1851.....	112
Nairn.....	51	51	Has fluctuated; now decreasing	114
Perth.....	55	50	Decreasing since 1831.....	111
Shetland	56	52	„ „ '61.....	136
Caithness	56	54	„ „ '61.....	113
Dumfries	74	70	„ „ '51.....	113
Bute	76	84	Has fluctuated; now increasing	124
Roxburgh.....	78	81	Decreasing since 1861.....	115
Berwick.....	79	70	„ „ '61.....	110
Elgin.....	82	91	Has fluctuated; now decreasing	113
Orkney	84	81	Decreasing since 1861.....	113
Banff.....	85	100	—	109
Wigtown	89	74	Decreasing since 1851.....	112
Kincardine	90	93	Has fluctuated; now increasing	102
SCOTLAND.....	97	135	—	107
Aberdeen	108	144	—	110
Kinross.....	123	86	Decreasing since 1831.....	112
Haddington	134	138	Has fluctuated; now decreasing	106
Ayr	168	201	—	104
Dumbarton	187	383	—	101
Stirling	193	281	—	99
Forfar	219	317	—	122
Linlithgow	251	440	—	89
Fife	312	381	—	110
Clackmannan	482	605	Has fluctuated; now increasing	108
Lanark	601	1,186	—	100
Renfrew	658	1,187	—	110
Edinburgh	716	1,199	—	111

TABLE XVII.—*Population of Ireland at each Census since 1821.*

Census.	Population.	Increase or Decrease.		Density per Square Mile.
		Absolute.	Per Cent.	
1821	6,801,827	....	....	215
'31	7,767,401*	+ 965,574*	+ 14.2*	246*
'41	8,175,124	+ 407,723	+ 5.3	259
'51	6,552,385	- 1,622,739	- 19.9	208
'61	5,798,967	- 753,418	- 11.5	184
'71	5,412,377	- 386,590	- 6.7	171
'81	5,174,836	- 237,541	- 4.4	164
'91	4,704,750	- 470,086	- 9.1	149

* There is reason to believe that the census of 1831 gave *too large* numbers. it was a long time in the taking, and payment was by results.

TABLE XVIII.—IRELAND. *Increase or Decrease of the Population in each County in Fifty Years; also Persons to the Square Mile.*

	Population.		Increase or Decrease.		Density per Square Mile.	
	1841.	1891.	Absolute.	Per Cent.	1841.	1891.
Antrim	354,178	428,128	+ 73,950	+ 20·9	319	386
Down	368,143	267,059	— 101,084	— 27·5	387	280
Londonderry	222,174	152,009	— 70,165	— 31·6	277	190
Donegal	296,448	185,635	— 110,813	— 37·4	162	101
Armagh	232,393	143,289	— 89,104	— 38·3	478	295
Tyrone	312,956	171,401	— 141,555	— 45·2	258	142
Fermanagh	156,481	74,170	— 82,311	— 52·6	244	116
Cavan	243,158	111,917	— 131,241	— 54·0	341	157
Monaghan	200,442	86,206	— 114,236	— 57·0	408	176
Ulster	2,386,373	1,619,814	— 766,559	— 32·1	290	197
Dublin	372,773	419,216	+ 46,443	+ 12·5	1,053	1,184
Kildare	114,488	70,206	— 44,282	— 38·7	176	108
Louth	128,240	71,038	— 57,202	— 44·6	407	226
Wexford	202,033	111,778	— 90,255	— 44·7	226	125
Wicklow	126,143	62,136	— 64,007	— 50·7	162	80
Carlow	86,228	40,936	— 45,292	— 52·5	250	119
Westmeath	141,300	65,109	— 76,191	— 53·9	210	97
Longford	115,491	52,647	— 62,844	— 54·4	288	131
King's Co.	146,857	65,563	— 81,294	— 55·4	191	85
Kilkenny	202,420	87,261	— 115,159	— 56·9	256	110
Queen's Co.	153,930	64,883	— 89,047	— 57·8	232	98
Meath	183,828	76,987	— 106,841	— 58·1	204	85
Leinster	1,973,731	1,187,760	— 785,971	— 39·8	261	157
Mayo	388,887	219,034	— 169,853	— 43·7	191	108
Sligo	180,886	98,013	— 82,873	— 45·8	257	139
Leitrim	155,297	78,618	— 76,679	— 49·4	269	136
Galway	440,198	214,712	— 225,486	— 51·2	190	93
Roscommon	253,591	114,397	— 139,194	— 54·9	281	127
Connaught ...	1,418,859	724,774	— 694,085	— 48·9	217	111
Kerry	293,880	179,136	— 114,744	— 39·0	163	99
Cork	854,118	438,432	— 415,686	— 48·7	298	153
Waterford	196,187	98,251	— 97,936	— 49·9	276	138
Limerick	330,029	158,912	— 171,117	— 52·0	319	154
Clare	286,394	124,483	— 161,911	— 56·5	241	105
Tipperary	435,553	173,188	— 262,365	— 60·2	266	106
Munster	2,396,161	1,172,402	— 1,223,759	— 51·1	259	127
IRELAND	8,475,124	4,704,750	— 3,470,374	— 42·5	259	149

TABLE XIX.—IRELAND. *Population of Principal Towns in 1891, compared with 1841.*

	Population.		Increase or Decrease.		Remarks.
	1841.	1891.	Per Cent.	Absolute.	
Carlow.....	10,409	5,591	— 46	— 4,818	Continuous decline.
Kilkenny.....	19,071	11,048	— 45	— 8,023	Maximum, 1851.
Clonmel	13,505	8,427	— 38	— 5,078	Continuous decline.
Drogheda	17,300	11,873	— 31	— 5,427	"
Limerick.....	48,391	37,155	— 23	— 11,236	Maximum, 1851.
Galway	17,275	13,800	— 20	— 3,475	"
Tralee	11,363	9,318	— 18	— 2,045	
Sligo	12,272	10,274	— 16	— 1,998	
Waterford	23,216	20,852	— 10	— 2,364	Maximum, 1851.
Cork	80,720	75,345	— 7	— 5,375	"
Armagh	10,245	10,070*	— 2	— 175	
Wexford	11,252	11,545	+ 2	+ 293	Maximum, 1851.
Dublin City ...	232,726	245,001	+ 5	+ 12,275	"
Newry	11,972	12,961	+ 8	+ 989	
Dundalk	10,782	12,449	+ 15	+ 1,767	Minimum, 1851.
Lisburn	6,284	12,250	+ 95	+ 5,966	
Lurgan	4,677	11,429	+ 144	+ 6,752	
Dublin suburbs	33,683†	97,381	+ 189	+ 63,698	
Derry	15,196	33,200	+ 118	+ 18,004	Continuous growth.
Belfast	75,308	255,950	+ 240	+ 180,642	"

* 1881. Boundaries altered since.

† This is an estimate, perhaps excessive.

TABLE XX.—FRANCE. *The Twenty most Densely Populated Departments.*

At Census of 1801.	Persons to a Square Kilometer.	At Census of 1846.	Persons to a Square Kilometer.	At Census of 1886.	Persons to a Square Kilometer.
1. SEINE	1,321	1. SEINE	2,847	1. SEINE	6,185
2. NORD	135	2. NORD	199	2. NORD	294
3. RHÔNE	107	3. RHÔNE	199	3. RHÔNE	277
4. Seine-Inférieure.	101	4. Seine-Inférieure.	126	4. Seine-Inférieure ...	138
5. <i>Manche</i>	90	5. PAS-DE-CALAIS ...	106	5. PAS-DE-CALAIS ...	129
6. <i>Calvados</i>	82	6. <i>Manche</i>	102	6. LOIRE	127
7. PAS-DE-CALAIS...	77	7. LOIRE	94	7. BOUCHES-du-RHÔNE	119
8. Seine-et-Oise ...	75	8. Somme	92	8. Seine-et-Oise	110
9. Somme	75	9. Côtes-du-Nord ...	91	9. FINISTÈRE	105
10. Côtes-du-Nord...	73	10. FINISTÈRE	91	10. LOIRE-INFÉRIEURE	94
11. Ille-et-Vilaine ...	73	11. <i>Calvados</i>	90	11. Ille-et-Vilaine	93
12. <i>Eure</i>	67	12. Seine-et-Oise	85	12. Côtes-du-Nord	92
13. FINISTÈRE	65	13. Ille-et-Vilaine ...	83	13. Somme	89
14. <i>Orne</i>	65	14. BOUCHES-du-RHÔNE	81	14. <i>Manche</i>	88
15. Puy-de-Dôme ...	64	15. Haute-Garonne ...	79	15. Meurthe-et-Moselle	83
16. <i>Sarthe</i>	63	16. Aisne	76	16. <i>Calvados</i>	79
17. LOIRE	61	17. Sarthe.....	76	17. Morbihan	79
18. <i>Tarn-et-Garonne</i>	61	18. LOIRE-INFÉRIEURE	76	18. Haute-Garonne ...	77
19. <i>Lot-et-Garonne</i> .	60	19. Puy-de-Dôme.....	75	19. Aisne.....	76
20. Oise	60	20. <i>Vaucluse</i>	74	20. Maine-et-Loire ...	74
France.....	51	France.....	66	France.....	72

Note.—The departments which are noted for INCREASE are printed in CAPITALS.

"

decrease

"

italics.

TABLE XXI.—FRANCE. *The Twenty most Sparsely Populated Departments.*

At Census of 1801.	Persons to a Square Kilometer.	At Census of 1846.	Persons to a Square Kilometer.	At Census of 1886.	Persons to a Square Kilometer.
1. CORSE	19	1. <i>Basses-Alpes</i>	23	1. <i>Basses-Alpes</i> ..	19
2. <i>Basses-Alpes</i>	19	2. Hautes-Alpes	24	2. Hautes-Alpes ..	22
3. Hautes-Alpes	20	3. CORSE	26	3. Lozère	27
4. Landes	24	4. Lozère	28	4. CORSE	32
5. Lozère	25	5. Landes	31	5. Landes	32
6. Pyrénées-Orientales ..	27	6. Indre	39	6. Haute-Marne ..	40
7. Cher	30	7. Loir-et-Cher	40	7. Cantal	42
8. Indre	30	8. Cher	41	8. Aube	43
9. Loir-et-Cher	33	9. Haute-Marne	42	9. Côte-d'Or	44
10. ALLIER	34	10. Aube	43	10. Indre	44
11. Nièvre	34	11. Pyrénées-Orientales ..	44	11. <i>Gers</i>	44
12. Vienne	35	12. Vienne	44	12. Loir-et-Cher ...	44
13. Indre	36	13. MARNE	44	13. Meuse	47
14. Var	36	14. Aveyron	45	14. Var	47
15. Drôme	36	15. Cantal	45	15. Aveyron	48
16. Vendée	36	16. Côte-d'Or	46	16. Yonne	48
17. Haute-Marne	37	17. Aude	46	17. Drôme	48
18. MARNE	37	18. ALLIER	46	18. Eure-et-Loir ...	48
19. Aveyron	37	19. Nièvre	47	19. <i>Ariège</i>	49
20. Cantal	38	20. Loiret	47	20. Vienne	49
France	51	France	66	France	72

Note.—The departments which are noted for INCREASE are printed in CAPITALS.
 “ decrease “ *italics.*

TABLE XXII.—FRANCE.—*Twelve Departments in which the Mean Number of Children to a Family was exceptionally low, compared with the like Number of Departments in which the Decrease of Population was excessive.*

Departments with Small Families.	Mean Number of Children to a Family.	Decreasing Departments.	Decrease, 1846-86.
1. <i>Orne</i>	1'31	Basses-Alpes	Uninterrupted
2. Seine	1'44	<i>Orne</i>	“
3. <i>Eure</i>	1'55	<i>Eure</i>	“
4. <i>Sarthe</i>	1'60	Manche	“
5. Aube*	1'61	<i>Gers</i>	“
6. <i>Lot-et-Garonne</i> ...	1'61	<i>Lot-et-Garonne</i> ...	“
7. <i>Calvados</i>	1'65	Ariège	Almost continuous
8. <i>Tarn-et-Garonne</i> ..	1'66	<i>Tarn-et-Garonne</i> ...	“
9. Gironde	1'71	<i>Calvados</i>	“
10. Indre-et-Loire	1'71	Jura	“
11. Côte d'Or*	1'74	<i>Sarthe</i>	“
12. <i>Gers</i>	1'76	Vaucluse	“
France	2'07		

Note.—Names common to both lists are printed in *italics.*

Departments marked * have decreased since 1846, but not continuously.

TABLE XXIII.—FRANCE.—*Increase of Foreigners, and Proportion of such Increase to Total Increase.*

Census.	Population.		Increase.		Foreign Increase per Cent. on Total Increase.
	Total.	Foreign.	Total.	Foreign.	
1861	35,834,902	497,091	—	—	—
'66	36,485,489	635,495	650,587	138,404	21'3
'76	36,905,788	801,754	420,299	166,259	39'6
'81	37,672,048	1,001,090	766,260	199,336	26'0
'86	38,218,903	1,126,531	546,855	125,441	22'9
25 years	—	—	2,384,001	629,440	26'4

TABLE XXIV.—NORWAY.—*Prefectures showing Decrease.*

	Population.			Increase or Decrease.		Increase or Decrease per Cent. 26 Years.
	1865.	1875.	1891.	1865-75.	1875-91.	
Nordre Bergenhus..	86,803	86,108	87,552	— 696	+ 1,444	+ 0'9
Hedemarken.....	120,442	119,449	119,129	— 993	— 320	— 1'1
Nordre Trondjem....	82,489	81,421	81,236	— 1,068	— 185	— 1'5
Kristians	124,980	115,522	108,076	— 9,458	— 7,446	— 13'5

TABLE XXV.—NORWAY.—*Rural and Urban Population.*

Census.	Population.		Increase.		Increase per Cent.	
	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.
1801	789,469	93,569	—	—	—	—
'15	791,741	94,633	2,272	1,064	0'3	1'1
'25	932,219	119,099	140,478	24,466	17'7	25'9
'35	1,060,282	134,543	128,063	15,444	13'7	13'0
'45	1,164,745	163,726	104,463	29,183	9'9	21'7
'55	1,286,782	203,265	122,037	39,539	10'5	24'1
'65	1,435,464	266,292	148,682	63,027	11'6	31'0
'75	1,481,026	332,398	45,562	66,106	3'2	24'8
'91	1,526,788	474,129	45,762	141,731	3'1	42'6
1801-91....	—	—	737,319	380,560	93'4	406'7

TABLE XXVI.—GERMANY. *Urban and Rural Population.*

	1871.			1880.			Increase in Nine Years. Per cent.
	Number.	Population.	Per Cent. of Total Population.	Number.	Population.	Per Cent. of Total Population.	
Large towns (over 100,000)	8	1,968,537	4·8	14	3,273,144	7·2	66
Average towns (20,000—100,000)	75	3,147,272	7·7	102	4,027,085	8·9	28
Small towns (5,000—20,000)	529	4,588,364	11·2	641	5,671,325	12·5	24
Large villages (2,000—5,000)	1,716	5,086,625	12·4	1,950	5,778,976	12·7	14
Rural districts	—	26,219,352	63·9	—	26,513,531	58·7	1
	—	41,010,150	100·0	—	45,264,061	100·0	10

TABLE XXVII.—UNITED STATES. *Growth of Vermont, Maine,
and New Hampshire in One Hundred Years.*

Census Interval.	Vermont.		Maine.		New Hampshire.		United States.
	Absolute.	Per Cent.	Absolute.	Per Cent.	Absolute.	Per Cent.	Per Cent.
1890-80	136	0·04	12,150	1·9	29,539	8·5	24·9
'80-70	1,735	0·5	22,021	3·5	28,691	9·0	30·4
'70-60	15,453	4·9	— 1,364	— 0·2	— 7,773	— 2·4	22·6
'60-50	978	0·3	45,110	7·7	8,097	2·6	35·6
'50-40	22,172	7·6	81,376	16·2	33,402	11·7	35·9
'40-30	11,296	4·0	102,338	25·6	15,246	5·7	32·7
'30-20	46,686	18·9	101,186	33·9	25,306	10·4	33·6
'20-10	18,071	8·3	69,564	30·4	29,562	13·8	33·4
'10-00	63,430	41·1	76,986	50·7	30,602	16·6	36·4
1800-1790	69,040	80·8	55,179	57·2	41,973	29·6	35·4

TABLE XXVIII.—UNITED STATES. *Urban and Rural Increase
of certain States during Decade 1880-90 compared.*

	Total Increase.	Urban.	Rural.
Vermont	136	2,836	— 2,700
Maine	12,150	14,253	— 2,103
New Hampshire	29,539	21,811	+ 7,728
New York	914,982	917,294	— 2,312
Massachusetts	455,858	402,951	+ 52,907
Ohio	474,250	365,704	+ 108,550

TABLE XXIX.—UNITED STATES. *Number of Counties in certain States which have Decreased in Population.*

State.	Total Number of Counties.	Number which Decreased in				Number which Decreased at least		
		1890-80.	1880-70.	1870-60.	1860-50.	Twice.	Three Times.	Four Times.
Alabama	66	5	2	41	6	8	2	—
California	54	12	3	15	2	9	3	—
Colorado	58	8	—	—	—	—	—	—
Florida	47	5	1	7	2	—	—	—
Georgia	137	19	6	33	48	24	4	—
Illinois	102	30	9	1	—	8	—	—
Indiana	87	24	4	3	2	8	—	—
Iowa	99	27	4	—	—	3	—	—
Kentucky	119	25	1	26	19	18	2	—
Maine	16	7	7	11	5	8	5	3
Maryland	24	9	1	8	1	4	—	—
Massachusetts	14	2	2	4	2	3	2	1
Michigan	84	12	1	3	1	3	—	—
Mississippi	76	11	8	32	6	9	2	—
Missouri	115	10	1	5	2	1	—	—
Nevada	14	12	2	—	—	2	—	—
New Hampshire	10	3	1	7	3	4	2	1
New Jersey	21	3	—	1	—	1	—	—
New York	60	23	6	20	10	17	5	—
North Carolina	96	9	2	26	12	7	1	—
Ohio	88	28	2	19	18	18	3	1
Pennsylvania	67	12	1	2	2	—	—	—
Tennessee	96	16	7	21	22	16	2	—
Texas	243	10	6	14	—	2	—	—
Utah	25	4	2	—	—	1	—	—
Vermont	14	8	4	6	7	9	5	1
Virginia	101	34	1	54	18	35	5	—
Total of these } 27 States....	1,933	368	84	359	188	218	43	7

DISCUSSION *on* DR. LONGSTAFF'S PAPER.

MR. C. M. KENNEDY, C.B., said that the facts were complex, but the results, generally speaking, were uniform. All the world over the people were flocking into the towns, though to a variable degree. Taking the case of the United Kingdom, two influences appeared to affect rural districts: the first, external—namely, that of the large towns, which led to an increase of population in their immediate neighbourhood; and the other, that of circumstances arising within rural districts, which led to a decrease of population. The former had been sufficiently treated in the paper, but as regarded the latter, it might be said that in general, in parishes with less than two thousand inhabitants, and outside the direct influence of the towns, the decrease was often in inverse ratio to the population. It was, however, not so much the villages as the outlying hamlets and houses, which were not conveniently situated for the social advantages of village life, that became untenanted or fell into decay. Such houses had been built in order that the labourer might be nearer his work, but at present female influence was adverse to them; the women liked to be in the village, and even more than the men preferred town life. Many occupations, such as the army and police, and various employments on railways, were mainly supplied from the rural districts, because countrymen were better fitted for them than townsmen. The long peace enjoyed in this century had also encouraged the rise of seaside towns. Generally the larger the town the greater was its tendency to draw people to it and to its immediate neighbourhood.

The same rule held good in Australia and New Zealand, where the population crowded into the larger towns, and the country districts became mere working localities where various farm industries are carried on, not localities of a resident population. In Germany it appeared that the rural population, according to the last census, was rather increasing, and that local industries were being developed. In Russia also both urban and rural population were increasing, the peculiarity in the case of Russia being that the rural districts still continued to be the home of the people resident there; they might go into the towns for some months, according to the trades they were engaged in, but they returned as soon as their particular work was done to their permanent homes. This had an important social and political bearing in Germany and Russia.

The conclusion seemed to be that at this period of the world's history there was in almost all countries an influx into the towns, to a variable extent, but to an extent which did in fact diminish the rural population. The conditions of life, and improved facilities of communication which enabled people to move about as they pleased; the convenience, freedom, and enjoyments of town life were preferred to the health and rest of the country. This result

was not brought about by the action of government, nor did it follow wholly from economic causes, but it was rather the effect of the circumstances of the times. Some of the forces now at work, such as the more recent indifferences to country life, were likely to become less effective during the next decade, but the influence of large towns on their immediate neighbourhood was likely to increase rather than to diminish.

Mr. NOEL A. HUMPHREYS said that Dr. Ogle, in his paper read four years ago, showed how the aggregation of the country population to towns arose mainly from two distinct sets of causes. In the first place it was of course due to the reduced demand for farm labour, which could fairly be attributed to agricultural depression; but in the second place it was also largely due to the extensive substitution of factory and machine made goods for the product of village handicrafts. Dr. Ogle had also pointed out that long experience in all ages had proved it to be impossible for any rural population, except in new and unsettled countries, to absorb the whole of its natural increase, or the excess of births over deaths. So long as we were able to employ the surplus rural population in the towns, so long would the population of England be maintained. The most striking feature in the census returns for 1891 was, however, the decreasing rate of aggregation to large towns. In the twenty counties of England which contained over 60 per cent. of urban population, the aggregate rate of increase showed a remarkable decline in the ten years 1881-91. The whole population of England and Wales had increased by 12 per cent., as against 14 per cent. in the previous decade; but the rate of increase in these urban counties had decreased from 19 to $12\frac{1}{2}$ per cent. It was also clearly shown that there had been a greater increase in the fifteen counties having the largest proportion of persons engaged in agriculture in the last ten years than in the preceding decennium. Dr. Longstaff had referred to this, although he had adopted a different method which gave somewhat different results. These fifteen counties indeed retained in the ten years 1881-90 a larger proportion of their excess of births over deaths than was the case in the preceding ten years. Not only, therefore, was the aggregation to towns lower, but the so-called depopulation in the rural districts was less. The exclusively rural registration districts, selected from the southern, eastern, and central counties, had in 1891 an aggregate population of nearly a million. He found that in these rural districts there had been a decrease of population of not more than 6 per cent. in the forty years 1851-91, and that the decrease in the last ten years was absolutely smaller than that in the preceding decade. It seemed, therefore, that the tide of rural exodus had turned, and while he believed that this decreased aggregation to towns was partly due to general commercial depression, the permanent decline of our towns could by no means be regarded as a sign of national prosperity.

Mr. JOHN WALTER thought that anything which threw light upon the alleged depopulation of rural districts was of the greatest

importance. The modern system of allotments—which people in his neighbourhood did not seem to care much about—and the various other schemes for bringing back the people to the soil, were, in his opinion, quack remedies for an evil which did not really exist, except in a few cases; in Essex, for instance, where the land had been thrown out of cultivation owing to the ruin of the farmers. In Berkshire he had not heard of any depopulation; he had always been able to obtain labourers when he required them. What surprised him was that labourers should be willing to leave a good cottage and garden, with 12 or 14 shillings a week, in order to live in a town for a pound or 21s. a week, out of which they would have to pay some 6s. for very inferior lodgings. They would be able to get people to stay in the country if they could make it worth their while, and for this purpose they must find the means of raising some produce which would pay for cultivation. He himself attributed the depopulation, so far as it existed, to the elementary schools. Depopulation had set in when people began to be better educated. Boys got to think that broadcloth was better than fustian, and the girls thought that a little finery suited them best. He was afraid also that popular education tended rather to discourage hard manual labour. This was also the case in America, where, as well as in England, the boys were all anxious to be clerks. In the same way the girls wanted to go into the factories, where they could get more amusements and society. This question of amusements was really the root of the matter. A labourer's life was certainly to some extent a dull one; still, he was better off in the country with a cottage and garden than he would be in the town with a third more wages. The condition of the dock labourers was miserable in comparison with that of an ordinary English labourer. Nevertheless, there was no complaint among farmers as to any difficulty in getting labourers suited to their purpose; there was especially a good demand for gardeners, who were better paid now than formerly.

At the beginning of the century, during the war, there had been a great movement in favour of increasing the population, and the system of paying labourers according to the number in the family had been introduced, the additional wages being made up out of the rates. After the war the object became rather to diminish the population, and a squire who built a cottage was abused for bringing more people into the parish. That was owing to the law of settlement, which had had more to do with the so-called abuses of the poor law system than anything else. Now the people could migrate as much as they liked. It seemed a remarkable fact that there should be so much emigration from Norway, a country which appeared to be eminently adapted for the labourer. Some years ago, when visiting the lunatic asylum at Madison (Wisconsin), he had found that Norway and Sweden sent a larger proportion of lunatics to this institution than did other countries, the reason being that they had come over to the United States without money and in great distress, and, after working like slaves, had become lunatics through misery and despair. Their children, however, generally turned out well.

There were therefore two sides to the emigration question. Wherever the white man could live he would make a home, and the inferior races would gradually disappear. It was a law of nature, and consequently, as Dr. Johnson said in "Rasselas," he did not trouble himself as to how the world was to be peopled, either in town or country ; it would take very good care of itself.

Mr. CLARE SEWELL READ was glad to find that his own views coincided with those of Dr. Longstaff. He quite agreed that increased education was the main cause of depopulation. The more a man was civilised the greater was his tendency to become more "club-able" and gregarious. It simply meant that the man preferred the conveniences, and especially the pleasures, of the town to the dulness and solitude of the country : it seemed to be the course of nature. The only means of checking this migration would be a revival of agriculture. Dr. Longstaff had mentioned the diminution of the rural population in Wales, he (Mr. Read) considered this to be in great measure due to the replacement of arable by pasture lands. Fifty years ago, in a district with which he was well acquainted, three-fourths of the land was arable, now it was all pasture. One farm of fifty acres in particular was managed entirely by a widow, her daughter, and one boy. Land under pasture or dairying, which required one, or at most two, labourers, would if under crops require four or five. This diminution of the arable land was therefore an important factor in rural depopulation in the greater portion of Wales, and also in East Anglia. Ever since 1874 they had had to contend with adverse seasons and low prices ; and now that they were suffering from a drought unexampled, he believed, in the present century, he should expect to find that a still larger proportion of land in East Anglia would be allowed to fall down to grass, and that there would be a larger number of the rural population seeking employment in the great towns.

Major P. G. CRAIGIE said that Dr. Longstaff had clearly demonstrated that what was popularly meant by *depopulation* had not actually occurred. That there had been a decrease in certain parts of the country was undoubtedly true, here as well as abroad. But there was nothing special in our English conditions in this respect ; what had happened was very much what Mr. Kennedy had described, and the decline was largely due to the causes mentioned by Mr. Walter and Mr. Read. The point alluded to by Mr. Humphreys was of importance, viz., that in the fifteen agricultural counties selected by Dr. Ogle when he dealt so clearly with this subject in 1889, the population, excluding urban districts of 10,000 or more inhabitants, instead of showing a decrease of over 4 per cent., as in the decade ending 1881, in the later decade to 1891 showed a decrease of less than 1 per cent. Looking now at the losses of population in the past forty years as recorded in Table IV of the present paper, it must be borne in mind that nearly one-half of the total loss (46,000 out of 108,000) had occurred in the single county of Cornwall, and there it was due almost

entirely not to agricultural but to mining causes. Shropshire also showed more recently a large decrease, but here again certain mining questions had probably to be taken into consideration. Of peculiarly agricultural counties in this table other than those in Wales, Cambridge showed the greatest loss, but it would appear that the loss here shown had almost all taken place prior to 1861. No doubt there was now in process a general tendency to a diminution of agricultural employment, owing, as Mr. Read had said, to the changes in the agriculture of the country, which required less labour than when there had been more arable cultivation. But that evening's discussion showed there had been no recent extraordinary diminution of the population such as was often alluded to in exaggerated articles on this question.

Mr. PRICE-WILLIAMS said that in a paper he read before this Society in 1880,¹ he had drawn attention to the fact that what was called depopulation of the rural districts was merely the result of the influx of the population into the towns.

At the beginning of this century the rural population of England and Wales exceeded that of the population of the towns by 1,662,046, and the rate of increase reached its maximum of 14·74 per cent. in 1811; the town population, which increased more rapidly, amounted to the same as that of the rural districts about the middle of the decade of 1841 and 1851, and from that time, as the tables and diagrams in his paper showed, the rural population had continued rapidly to decline, while the town population had as rapidly increased, so that in 1871 it exceeded that of the rural districts by nearly $2\frac{1}{2}$ millions, as graphically shown in the diagram illustrating his paper.

The decrease in the population of Ireland to which the author had drawn attention, was very remarkable, and having regard to the fact that its population in 1841 exceeded 8 millions, or 263 persons per square mile, a greater density, as the author pointed out, than that of a great country like Austria, was a very significant fact, and showed that the rapid decrease which had since occurred could not but be regarded as a healthy indication when the very limited natural resources of the country were taken into consideration.

As regarded the cause of the depletion of the rural districts in England, he was glad to learn from what had fallen from Mr. Noel Humphreys that this was not attributable to the agricultural depression. He concurred in thinking it was not alone the pursuit of pleasure which had led to this influx of the rural population into the towns, but somewhat mixed motives, amongst which not the least was the very natural desire to attain to a better social position.

Mr. C. S. LOCH said that the fluctuations in the four typical south-western counties were very striking. The number of dis-

¹ "On the Increase of Population in England and Wales, 1801 to 1871." Read June, 1880, and printed in the *Journal*, part 3, vol. xliii.

tricts showing a decrease were, in successive periods, twenty-four, forty-two, twenty-three, forty-seven, and thirty-nine. He would like to ask whether Dr. Longstaff could assign any reason for these remarkable variations. Reference had been made to Petty. Defoe, in his "Complete Tradesman," gave an instance of the effect of direct lines of trade. He took the case of a Wiltshire clothier, who supplied a Northamptonshire shopkeeper.

"The wearer or consumer's buying the cloth or stuff 6*d.* a yard, or a suit of clothes 2*s.* or 3*s.* the cheaper, is not equivalent to the public to the finding bread and subsistence, as it passes, for six or seven families who might otherwise gain their living by that manufacture if it went in the ordinary channel. For example:—

"Suppose the manufacture be a piece of broad cloth, and is made at Warminster, in Wiltshire. The clothier, when it is finished, sends it up by the carrier to London, to Mr. A., the Blackwell Hall factor, to be sold. Mr. A., the factor, sells it to Mr. B., the woollen draper. Mr. B., the woollen draper, sells it to Mr. C., shopkeeper at Northampton, and he cuts it out in his shop, and sells it to D. E., Esq., a country gentleman, and other gentlemen about him, to make them new suits of clothes; and so they are the last consumers. Also it is sent down by the carrier from London to Northampton.

"Now, between the Wiltshire clothier and the Northampton shopkeeper here are no less than four important families of tradesmen, who get their living, and perhaps in time grow rich by their business in the negotiating, as I may call it, this cloth.

"1. The carrier from Warminster to London. His pay comes to perhaps 5*s.* per cloth, which is 2*d.* per yard upon the cloth at market.

"2. Mr. A., the Blackwell Hall factor, has his commission at $2\frac{1}{2}$ per cent., which, if this cloth be sold for 15*s.* a yard, amounts to 4 $\frac{1}{2}$ *d.* per yard.

"3. Mr. B., the woollen draper, selling it to Mr. C., the shopkeeper at Northampton, and giving him perhaps six to nine months' credit. He cannot afford to get less than 9*d.* or 1*s.* per yard by him.

"4. The Northampton carrier, for carriage, must have something. Suppose about 1 $\frac{1}{2}$ *d.* per yard for carriage; all which amounts to 1*s.* 8*d.* per yard advance upon the cloth.

"But, now, here is Mr. F. G., another shopkeeper at Northampton, an overgrown tradesman, who, having more money than his neighbours, and wanting no credit, he finds out where these cloths are made, and away goes he to Warminster directly, settles a correspondence with the clothiers there, buys their goods, and has them brought directly by horse packs to Northampton; and perhaps paying ready money, tempts the clothier to sell it him 1*d.* per yard cheaper too, than his factor sold it at London to the woollen draper.

. "And what is all the benefit which is made by this spoil upon trade? Only this: to make one covetous man rich, and that Squire D. E., of Northamptonshire, may buy his suits of clothes so much a yard cheaper, which is of no great concern to

him, nor does he value it; nor is it of any moment in proportion to the wound which trade receives by it, in all the particulars mentioned above.

"This is cutting off the circulation of trade; this is managing trade with a few hands; and if this practice, which is indeed evidently begun, was come to be universal, a million of people in England, that now live handsomely by trade, would be destitute of employment, and their families, in time, want bread."

The lessened circulation of trade would thus inevitably tend to centralise population. But there was another side to the question. Facility of locomotion carried with it its own cure, in some measure. By it large urban centres of population were formed, but by it also these urban centres spread out far and became ruralised.

Mr. F. HENDRIKS desired to call attention to the fact that not our country alone, but the whole habitable parts of the globe, were interested in the gigantic problem and the questions arising out of it, illustrated by Dr. Longstaff's statistics. This tendency to migrate from the rural districts to the towns was to be found in countries where either free trade or protection existed, or which were or were not, afflicted with any agricultural distress. It seemed to be a common tendency to all mankind, and to be a kind of instinct, like that of the bee who flies to seek the flowers from which to gather honey, alike on the distant mountain as in the nearest and most fertile mead. It was surely a sound economic principle which led men to go where they would get the most profitable employment, and according as the ever increasing facilities in the means of locomotion enabled them to transfer their services to the best market.

Mr. S. B. L. DRUCE said that not having given that attention to the 1891 census that he had given to the 1881, he had been surprised to hear that the decrease in the rural depopulation of this country had been less in the last decade than in the preceding one. The causes seemed to be that the great disturbance among the farm labourers first occurred during the decennium 1871-81, that strikes began among that class during that period, that agitators and others, no doubt with the intention of improving the farm labourers' position, caused them to be discontented, and above all, education then began to be general among them. It was also intensified by the fact that in the earlier part of the period trade was very good, while in the later part agricultural depression had set in and was annually getting worse. The poorer classes were then more anxious to escape it, whereas many of them were now more resigned. With regard to the large number of countries affected by the movement, it seemed to him, contrary to what others had said, that this very universality went to show that it was due to agricultural depression, since it was well known that agriculture had for some little time past been and was still in a depressed condition over nearly the whole world.

Sir RAWSON W. RAWSON agreed that the two chief elements of the change were facility of communication and the extension of education, with which must be taken into account also the effect of the spread of literature. This had encouraged young people to seek for an improvement in their position, and at the same time to seek to get more amusement than they could do in the country. But another factor, arising out of the above-mentioned causes, was the solution of those bonds of sympathy, or of obligation, which formerly existed between different classes in rural districts. Formerly the peasant rarely thought of breaking off his relations with his employer, and his family and surroundings, but now the opportunities and inducements to leave drew the rural population into the towns, where they could improve their position, and enjoy more amusement.

Mr. BALDWIN FLEMING considered that the paper was eminently reassuring, since the causes which had been assigned were more than sufficient to account for the slight depopulation which had occurred, at all events, during the last ten years. Agriculture in England had undergone a great change during a considerable period; new wheat countries had been opened up, and great facilities had been afforded for importing food from abroad, so that agriculture appeared to have been subjected to much the same conditions as the manufacturing industry when machinery had been introduced. With such an alteration it was too much to expect that agriculture would find its level in a short time, but it was quite a mistake to imagine that the depression would continue indefinitely. The English farmer would accustom himself to the new condition of things, as he had done in the past in former times of depression. Agriculture had always been, and would continue to be, a staple industry of England, and he saw no reason why the farmers should not again meet with success when the present conditions had passed away. Considering the effects of the depopulation of the rural districts on the condition of the population of England, it had been alleged that they had caused much harm: that he doubted very much. It could not be advantageous to keep the superfluous labour in the rural districts. So long as there were hands enough to do the work, to keep superfluous labour in the country meant either that wages would be reduced or that some people would be kept out of work, and must come to the poor law for relief. Consequently it seemed to be a very desirable and reassuring result that, whilst the agricultural depression lasted, this extra population should be drawn into the towns and other great sources of employment.

Dr. LONGSTAFF said that he was unable to answer Mr. Loch's question, and that the other speakers had so generally concurred in his own views that there was very little left for him to say. They had mostly dealt with what he called the subsidiary causes, but Mr. Hendriks had summed up the whole paper in a few words. What he had particularly wished to emphasise was that rural depopulation did not concern England only, but was of

world-wide, if not universal, extent. It was a phenomenon associated with the general development of this century, and was not due to any local causes or abuses, real or imagined. Such local causes might intensify the phenomenon, but this was far too widespread to be so explained. It was an inevitable concomitant of progress, and as such we should, on the whole, welcome it; but, like all progress, it contained a certain amount of retrogression, and we should therefore try to minimise the evils, and make the most of the good which resulted from it.

INVESTIGATIONS of MORTGAGES and FARM and HOME PROPRIETORSHIP
in the UNITED STATES. By GEORGE K. HOLMES, Esq., *Special
Agent in charge of Farms, Homes and Mortgages, Census of 1890.*

WHEN the United States Census Office was required to collect statistics of "the recorded indebtedness of private corporations and individuals" in 1890, the intention was that the existing indebtedness of this sort, chiefly the real estate mortgage debt, should be determined. By 1889 mortgages had created considerable discontent, not to say alarm, particularly in the Western States, where, it was alleged, the farmers were overburdened with a debt that had been forced upon them by tariff, monetary and other legislation, by various monopolies and the exactions of money lenders. The demand for some definite information in regard to the mortgage burden would not have been satisfied with statistics of the mortgages made in any one year, nor with a statement of the mortgage movement for a series of years, but insisted upon a discovery of the amount of existing debt, so that there was forced upon the Census Office a novel investigation of great and unknown magnitude, with little prospect of success.

The field to be covered was of enormous extent, with a population of 62,622,250, and an area of 2,900,170 square miles of land surface, not including Alaska and Oklahoma. Within this region were 2,781 counties, each one with at least one public real estate record office, a few counties with two or three offices, and 27 counties with an office in each town—in all more than 3,000 record offices. It would take one man about ten years to travel to all of these offices, without pausing to do any work in them.

There were 44 States, 3 territories, and the District of Columbia, with 48 systems of real estate laws differing more or less from one another; and of still greater importance were the local customs of conveyancers, of public recorders, and of the people themselves. Mortgages were renewed within three to five years in some States, if not paid; in other States rarely renewed. In some counties full payment had generally been followed by a cancellation in the public records; in others a surrender of note and mortgage to the maker had often been regarded as sufficient.

Then the mortgages were in numerous forms, all not easily recognisable unless by lawyers and public recorders familiar with local customs, and lawyers and recorders would not generally enter

the employment of the Census Office without exorbitant fees. Among the varieties of mortgages were simple conditional conveyances; instruments conferring upon mortgagees or third parties a power to sell upon breach of condition; bonds for conveyance upon full payment of purchase price; deeds with a reservation of vendor's lien; unconditional deeds, supplemented by grantee's bond to reconvey; and in one large State it was customary for debtors to confess judgment against themselves or to give bond to a court, in both cases placing liens on their real estate, which the Census Office was compelled to regard as equivalent to mortgages.

Under these circumstances the office, required, as it was, to plan, begin and conduct an elaborate census in a hurry, and with the disadvantage of a new and hasty organisation, felt its weakness to grapple with the mortgage problem when it should have had several years and a large amount of money for experiments.

Several State bureaus of labour statistics had undertaken to solve the mortgage problem in 1888 and 1889 by different methods. One bureau called the sum of the mortgages made during the preceding twenty years and uncanceled in the public records, the true amount of the existing debt. While there is no compulsory registration of mortgages in the United States, registration is practically necessary for the certainty of the liens, and is almost invariably made; but partial payments are not recorded, and full payments are often not followed by cancellations in the records, owing to ignorance and carelessness. The error of accepting the face of the uncanceled records for a period of twenty years or, if for a shorter time, as far back in time as the records have been made, was subsequently determined by the Census Office in 102 counties, distributed throughout the Union, and was found to be 57·86 per cent. That is, for an actual debt of \$100, the records showed an apparent debt of \$158; in one county they showed as much as \$629. This imperfection of the records has justified the Census Office in declining to adopt this method, although the common expectation of the people interested in the investigation was that it would do so.

Other bureaus, with very limited success, had endeavoured to obtain reports of existing debt upon requests sent by mail to the makers of uncanceled mortgages, and the Census Office experimentally tried this method in three counties, but no conclusive results were produced, for want of time to continue the experiment. It might be reasonably safe to take the averages of the returns and apply them to the large proportion of unknown quantities that must remain when the mail has ceased to be productive, in many counties where there is no manufacturing nor mining, and where the mortgages are small and the population

mostly resident in the country and in small villages; but in the South, education is not sufficient for such a procedure, and in the more populous counties elsewhere few reports would be made for the larger mortgages and insufficient reports for the smaller ones, so that it would not do to depend upon averages for the treatment of unknown quantities. Business men and city residents are least willing to respond to requests for information in regard to their mortgages, which are considered their private affairs, although, as a matter of fact, nothing that they do is more public than the mortgages that they make. Consequently dependence upon the mail was rejected.

A house to house canvass was thought of, but statistical experience in matters of an allied character was entirely against it, and even if it had not been so, the cost of the canvass would have been far too great for the means at command.

In the Netherlands, Sweden and Prussia, had been employed a method that incorporated in the result the error of the records; for a series of years the cancellations were subtracted from the incurred debt and the remainder called the existing debt. Without raising any question as to the treatment of renewals and the taking of cancellations made within the series of years, of mortgages made before the series began, it is sufficient to say that this method, if employed in the United States, and covering a series of years sufficiently long, would produce an apparently existing debt greater than the value of all of the real estate in the country.

It was early regarded as probable by the superintendent of census that congress had imposed upon him an undertaking that could not be executed, and a consideration of the various plans of work mentioned only made the probability more certain. No attempt to ascertain the amount of existing mortgage debt by a direct statistical method had succeeded, and other direct methods were still more unpromising of success; yet a large number of people were demanding that the debt should be ascertained, and, had no fairly successful attempt been made, would have charged the superintendent with an unwillingness to reveal a supposed state of affairs which they regarded as inimical to the existing administration.

In such a strait, recourse was had to an indirect process. The secretary of the Illinois Bureau of Labor Statistics undertook in 1887 to determine the amount of the debt existing under real estate mortgages by a computation depending upon the average life of mortgages, and, with this suggestion, the Census Office experimented and evolved a plan of work which was eventually adopted, rather than to abandon entirely what was popularly regarded as the most important element of the mortgage investi-

gation. This plan included only real estate mortgages and their substitutes, which constitute almost the entire "recorded indebtedness" of the people, because it was not adapted to other recorded evidences of indebtedness; previous to the experience of the present Census Office in this matter, no practical method had appeared for sifting down to an existing debt, crop liens, chattel mortgages and court judgments.

In the method adopted for real estate mortgages, their average life is first applied to the debt incurred. Suppose that a mortgage for \$100 is made 1st January every year and endures for three years, during which time no partial payments are made. The amount of debt in force at any given time may be readily seen if each mortgage is represented by a line in this simple graphic arrangement:—

1883	1884	1885	1886	1887	1888	1889	1890
------	------	------	------	------	------	------	------

In July, 1887, there are in force the mortgage made in 1885, the mortgage made in 1886 and the one made in 1887. That is to say, the existing debt is represented by the lines under the given date, or by three mortgages amounting to \$300. In other words, the debt incurred within a period of time equal to the average life of the mortgages, which is three years preceding any given date, is the actual debt at this date.

Under such uniform conditions the problem is simple, but these are never actual conditions, and the problem is more complicated when account is taken of mortgages made every day for various amounts, and enduring for various periods of time, from a few days to many years. In overcoming this difficulty it will not do to resort to a simple average of the periods of time during which the different mortgages endure before final payment, because an average of time ignores the varying amounts of the mortgages.

A complication of the time with the debt incurred, however, is the proper procedure. A mortgage for \$500, enduring for five years, and one for \$1,000 enduring for two years, are equivalent to one mortgage for \$1,500 enduring for three years, when an equation of time and debt is established. If we are dealing with considerable numbers of mortgages, this equation of time and debt gives us a mathematically representative mortgage. In this way conditions at first appearing to be exceedingly diverse are reduced to quite uniform conditions. For illustration, in nearly all of the

101 counties of the State of Iowa the average equated life of mortgages is found to range very nearly from four and a half to five and a quarter years.

It may be supposed, now, that there is a county for which the life of mortgage debt has been established in this way to be five years. This is as much as to say that one mortgage, equal in amount to the sum of all the actual mortgages made during each year, was made at a certain time of the year to endure for five years. Consequently, if no partial payments have been made, the existing debt at a given date is the same as the sum of the mortgages made during the preceding five years, whether actually paid or not, and exclusive of those still unpaid, though made prior to the five year period.

But this alone does not solve the problem. Partial payments have been made on existing mortgages, more or less, and these must be taken into account. The allowances to be made for such payments were ascertained in 102 counties in various parts of the United States, and, with some averages, were adopted in the plan of work. More particular description of the method employed in these counties will subsequently be made.

The computation of existing debt in accordance with the principles that have been outlined may be illustrated by a simple supposed case. In a certain county the average equated life of mortgages is found to be three years, and a mortgage debt of \$1,000,000 was incurred in each of the years 1887, 1888, and 1889; the existing debt, therefore, was \$3,000,000 on the 1st January, 1890, minus the proportion of partial payments that is established. If we suppose this to be 10 per cent., the net existing debt becomes \$2,700,000, which remains after deducting 10 per cent., or \$300,000, from the \$3,000,000.

In deriving the existing debt of \$2,700,000 from the mortgages made during the three years 1887, 1888, and 1889, there are really included some mortgages that have been fully paid, and there are excluded, also, some mortgages that were made in 1886 and previously, which have not been fully paid. But these two groups of mortgages exactly off-set each other, if the mortgage life of three years is accurate; and it is immaterial that mortgages made in 1886 or any previous year are still in force, and that some mortgages made in 1887, 1888, and 1889 have been fully paid.

The character of the solution may be more clearly understood if the facts, ascertained in a county, are presented in a geometrical diagram. For this purpose Jefferson county, Alabama, is selected. In this county all the facts relating to the mortgage debt, including the existing debt, were obtained from the records and from

personal inquiry of individuals, so that nothing was left to computation. This diagram is drawn to scale in regard to amounts of debt, but not in regard to periods of time covered. The right half of the diagram covers a period of two and three-quarter years, which is precisely the average time during which mortgages have endured from the time they were made to the time of their final payment in this county, both debt and time being taken into account. The left half covers sixteen and a quarter years, which extend back to 1871, when the oldest existing mortgage was made.

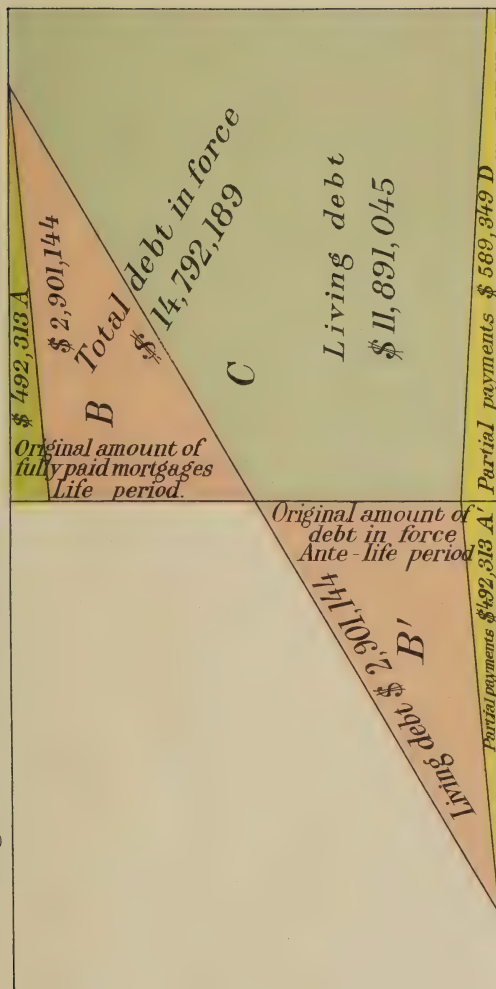
It is from the debt incurred during the period of two and three-quarter years that an amount equivalent to the existing debt is derived by computation. A debt of \$15,873,851 was incurred during this time, and this occupies the whole right side of the diagram. But some of these mortgages have been paid in full; these fully paid mortgages amount to \$3,393,457, and are represented by the sections marked A and B in this part of the diagram; so that the remaining sections marked C and D in this part stand for the face, or original amount, of the existing mortgages made during the two and three-quarter years.

Some of the existing mortgages were made during the period of sixteen and a quarter years preceding the life period; the face of these mortgages is represented in the left part of the diagram by the sections marked A' and B', and amounts to \$3,393,457, or exactly the same as the amount of the fully paid mortgages made during the life period of two and three-quarter years, and represented in the right part of the diagram by the sections marked A and B. Therefore these equivalent amounts may be transposed, and we shall then have the face of all of the existing mortgages in the right part of the diagram, which covers the period of two and three-quarter years; and in the left part of the diagram, which covers a period of sixteen and a quarter years, we shall have nothing but fully paid mortgages.

The face or original amount of the existing mortgages now fills the right part of the diagram, and nothing remains to be done but to take from the face of these mortgages the partial payments that have been made on them. The partial payments are represented by the section marked D, and, by transposition, the section marked A in the right part, and amount to \$1,081,662. After subtracting these sections from the \$15,873,851, which is contained in the whole right part of the diagram, the sections marked B and C in this part remain, and these include precisely the equivalent of the existing debt, or \$14,792,189.

The only existing debt in the diagram is in the section marked C on the right, which is all that remains of the debt incurred during the two and three-quarter years, and in the section marked

Diagram for JEFFERSON COUNTY, Alabama.



B' on the left, which is all that remains of the debt incurred during the period of sixteen and a quarter years. The two sections marked B and B' are exact equivalents; let them exchange places and all of the existing debt finds a place in the right part of the diagram, so that the section marked C on the right, and the section marked B above it, stand for the existing debt.

It was ascertained that the partial payments are 6·81 per cent. of the face of the existing mortgages in this county, and that the true life of mortgages is two and three-quarter years. Having this information, and knowing that a debt of \$15,873,851 was incurred during the two and three-quarter years, it is theoretically and actually correct to deduct 6·81 per cent., or the partial payments, from this amount in order to arrive at the existing debt, which is thus shown by computation to be \$14,792,189, or precisely the amount established by personal inquiry.

The process then, based upon these established relations, consists simply in deducting from the original amount of the mortgages made during a period equal to the average life of mortgages in each county, the amount of the partial payments made on all existing mortgages. This in ordinary cases gives the debt in force with a small percentage of error for the county unit, and a diminishing error for States and for the whole country, because plus and minus county errors in the computation of life, and in the allowances for partial payments, tend to cancel one another.

In the practical application of this process, however, in some counties, conditions are encountered that lead to more or less error. The life of mortgages as ascertained from the records does not accord with their true life, although the difference is generally small.

The allowance to be made for partial payments has presented another source of error. The Census Office has been compelled to rely upon the results obtained in the 102 counties where special investigations were conducted, for the allowance to be made for these payments. Yet, fortunately, the proportion of the partial payments is not very variable throughout large regions, and is not generally more than 10 or 15 per cent.

In a county in which the number and amount of mortgages made each year are small, it is admitted that a large percentage of error may go with this method of computing the amount of existing mortgage debt. The body of incurred debt may not be sufficient to present the required uniformity of conditions in such counties, and from year to year, that is found in counties where the incurred debt is large; but while the percentage of error may be large in these counties, the amount of the error is small, and has

an exceedingly small place in the debt of a State, and a still smaller place in the debt of the nation.

The error of computing the mortgage debt of counties in the way that I have explained is known in counties where the debt has been ascertained by personal inquiry of debtors. In such of the 102 counties as have already been tabulated, the error generally ranges from 1 to 12 per cent., some of the errors being plus and some minus, and the average error of all these counties is only 1.13 per cent.

This method evades the immense error of accepting the face of the real estate records. It is safe to say, after an intimate knowledge of the application of this method, that the existing real estate mortgage debt of the United States can be computed by it with an error of less than 10 per cent., perhaps as low as 5 per cent., and, not improbably, with an error of less than 5 per cent.

This method, however, is not applicable to chattel mortgages, judgments, and recorded evidences of debt, other than real estate mortgages, because they do not constitute a sufficiently large body of incurred debt throughout the counties of the Union, to afford a trustworthy basis for computing the life of a debt of these descriptions, and to determine by personal inquiry what allowance to make for partial payments in counties outside of those in which they are ascertained. For this reason the Census Office included only real estate mortgages in the statistics of recorded indebtedness, although, had not the great expense been an obstacle, it is now known that it would have been possible to discover the amount of existing recorded debt of all descriptions by personal inquiry.

The method of computation that I have explained survives a crucial test in the 102 counties, where the amount of existing debt has been ascertained by personal inquiry; it is supported by the comparative results obtained in large groups of counties, and by the ratios of existing debt thus obtained to the population, to real estate values, and to the amount of debt incurred during a ten-year period ending with 1889.

The requirements of this solution of the problem involved a discovery of the mortgage movement for a series of years, which was quite as desirable as the determination of the existing debt. Ten years, 1880-89, were chosen. A slip for each mortgage, instead of a schedule for many mortgages, was employed, as best affording a classification of the facts taken and their complication with one another by means of sorting, in the process of tabulation, and the superiority of the slip has been fully established.

On each slip the following facts were noted for each mortgage:

(1) name of the State; (2) name of the county; (3) the year when the mortgage was made; (4) number of lots covered; (5) or, number of acres, if mentioned—if not, then the fact that the mortgage covered a tract of land large enough commonly to be measured in acres; (6) the amount of the debt; (7) the rate of interest; (8) for the mortgages made in 1880-83 and cancelled in the records, the full dates of making and cancellation.

The mortgage debts of quasi-public corporations were excluded, partly because it was practically impossible to dispose of such a mortgage as that of a railway in a tabulation by counties, and more especially because the public interest was confined to the mortgages of the masses of the people. It was desirable to collect statistics of foreclosures, but the expense of doing so ruled them out.

No fact was so difficult to obtain nor made so much trouble in the supervision of the field work as the rate of interest, owing to attempted evasions of the usury laws that are nominally in force in most of the States and to the commissions taken by loan agents. Such commissions are not legally a part of the rate of interest, except in two States, but were included as an element of cost to the borrower.

A classification of mortgages as covering "acres" or "lots" was the best that was practicable, although not wholly satisfactory. Under the former designation are included agricultural land, woodland, mining lands, suburban tracts withdrawn from agriculture and about to be subdivided into lots, and other non-agricultural real estate holdings not small enough to be mentioned as lots. The difficulties opposed to a sub-classification of acre tracts were too great to be overcome within the limits of the time and money at command.

Special agents were employed to make the abstracts from the records, most of them being men already familiar with real estate records, and from the 2,781 counties of the union (Alaska and Oklahoma not included) they made returns for about 9,000,000 mortgages made during the ten years. Some criticism has been expressed because the official recorders of deeds were not employed for this purpose. In regard to their availability for such work it may be estimated from correspondence with them in regard to this undertaking, and from experience with them in other matters, that one-quarter of them would have failed to respond to offers of a reasonable compensation for making the abstracts; a quarter of them would have proved to be incompetent; another quarter would have undertaken to do the work at an extravagant price, and then placed it in charge of political hangers-on unqualified to do it; while the remaining quarter would have done the work well

at a cost much greater than was incurred in the employment of special agents.

In the special investigations conducted in 102 counties, geographically distributed, and selected with reference both to typical and to exceptional character, much was contributed to method. These counties have populations ranging from a few thousands to 164,555. There was no reason to expect that the amount of existing debt could be determined without the application of averages to proportionally large unknown quantities, and the chief object was to discover why mortgage debt is incurred. Unexpectedly these investigations were decidedly successful. Most of them were in charge of exceptionally capable special agents, who were required to ascertain in regard to each mortgage uncanceled in the records, the unpaid amount of debt and the reason why it was incurred. While it had been experimentally proved that the people are not so reluctant to give this information as there was reason to suppose that they would be, still it was feared that an effort to secure the facts in regard to every mortgage would stir up many persons who would be easily irritated, and who would enlist the aid of newspapers and thus arouse a feeling against the census that would endanger the decennial enumeration of the people, soon to follow.

Consequently the first effort was confined to the mail. The uncanceled mortgages were brought to the attention of the mortgagors whose post office addresses could be learned. Some of these persons were too indifferent to respond; a few did not respond because they regarded the matter as private; some were too ignorant to make intelligible returns; others, of foreign birth and distrusting the government at such an unheard of request, were afraid to answer. But a majority of those who were reached responded, often in person and, with few exceptions, with good nature.

Varied motives brought the responses. Many of them were made as a matter of course. In many cases the requests alarmed persons who had paid their mortgages and feared that, through legal technicality, they would have to pay them again, and this led to an extensive recorded cancellation of dead mortgages. It may be imagined how a simple countryman would receive a communication from the United States Government, of which he had read but with which he had never before come in contact in the slightest perceptible degree. Evidently his mortgage had become an affair of State, and, after he had collected his thoughts, he made some sort of statement by mail, often largely consisting of family history, or perhaps hurried to a lawyer or to the agent of the government to clear up the mystery. In more than a few

instances it was believed that the government had set out to collect mortgages, and appeals for forbearance were made with piteous humility; but more frequently it was supposed that the government had begun to lend money on real estate mortgages. Yet, on the whole, there were little misunderstanding and alarm and still less irritation produced by the requests made by mail.

In the first days of the inquiry in the 102 counties, special agents were urged to examine tax and other public records, to question building and loan associations, real estate abstract and title companies, real estate and loan agents, and various county officers. In the South, especially, it was found that these were sources of abundant information, to be supplemented in the larger towns by personal application to mortgagors; and when it soon became apparent that the investigation in every Southern county would be fully successful, the special agents in Eastern, Western and Pacific counties were pushed to adopt every resource which fast accumulating experience discovered, even to the degree of making an extensive personal canvass. Mortgage debtors were sometimes reluctant to say how much they owed and why their mortgages were made, but less than 1 per cent. of their entire number refused to do so; their refusals, however, did not prevent the special agents from getting the information from others. The unknown quantities that finally remained in a few of the counties were hardly worth any consideration; they were all represented by mortgages whose holders, if any, could not be found, and covering land whose owners could not be reached without too great expense.

The special investigation in the 102 counties alone constituted an undertaking of considerable magnitude. There were 334,799 mortgages without recorded cancellations, in regard to which inquiries were made; the area of land surface in these counties is 117,061 square miles, or about the same as the area of Italy or Prussia, and the population was 3,217,962, or about half of the population of Belgium.

So it was at last demonstrated, after trials of purse and patience, that a statistical office in the United States, provided with abstracts of certain particulars from the public records, can determine the amount of the existing "recorded indebtedness of "private corporations and individuals" by a direct method, as certainly for crop liens, chattel mortgages, judgments, &c., as for real estate mortgages. If Congress were again to order such an investigation for all the counties of the United States, it would be safe to promise its successful termination under the method employed in the 102 counties, with an unlimited supply of money, with no limitation of time, with a permanent census office possessing a nucleus of expert agents, and with a superintendent at liberty

to choose temporary agents without political influence. Practically the requirements are too great, and no doubt, if an investigation of recorded indebtedness were again presented, it would necessarily be confined to real estate mortgages and be compelled to adopt substantially the method followed in the census of 1890.

Farm and Home Proprietorship and Incumbrance.

In another form, a problem of a character similar to that of real estate mortgages was imposed on the Census Office by Congress in February, 1890, in the following terms :

“That it shall be the duty of the Superintendent of Census, in addition to the duties now required of him by law, to ascertain the number of persons who live on and cultivate their own farms, and who live in their own homes, and the number who hire their farms and homes; and the number of farms and homes which are under mortgage, the amount of mortgage debt, and the value of the property mortgaged. He shall also ascertain whether such farms and homes have been mortgaged for the whole or part of the purchase money for the same or for other purposes, and the rates of interest paid upon mortgage loans.”

A million dollars were at the same time appropriated for the expenses of the investigation, with the expectation that still more money would be needed. Congress nearly made the fatal mistake of determining the method by which these statistics should be collected, and, had it not been for the Superintendent of Census, would have placed the whole burden on the enumerators who were to take the eleventh census of the people, their industries, &c., in the following summer. It was realised by him that the rest of the census might suffer, if questions subsequently termed “inquisitorial” by many newspapers, were added to the customary questions asked by enumerators. Discretion having been granted to him, he decided to employ a variety of methods, rather than to stake the success of the investigation on an effort in one direction.

The scheme eventually adopted required the enumerators to make the primary classification of families into those cultivating farms, and those occupying homes that were not farms; to report whether each family hired its farm or home, or owned it with or without incumbrance, and if with incumbrance, to report the post office address of the owning member of the family, and to identify him, all on the family schedule carried by the enumerators. This schedule was the one on which were reported age, sex, nativity,

occupation, &c. Thus the enumerators had nothing to do with questions concerning the amount of the debt, values, the rate of interest and the purpose of the debt, which, it was presumed, would be dangerous ones to ask in connection with the ordinary census questions.

An additional reason for withholding such inquiries from the enumerators was the certainty that, in their tour, they would not find at home a person who could answer them in a large majority of the families, and enumerators rarely make a second call on a family. Suffice it to say that the wisdom of this course has been made unimpeachable by the experience of the office in the enumeration as limited, and in the investigation of real estate mortgages.

The next step was to select families reported as owning their farms or homes under incumbrance, and the families for which the enumerators did not make full reports as required, and to send to them by mail a request to return a statement of the remaining facts that were wanted. Of course a considerable proportion of the families would not make the returns, and the facts in regard to them were to be sought by special agents directly by personal interview, or indirectly by examination of tax and real estate records and inquiries made of certain public officers, loan agents, &c., as the office was then doing in the mortgage investigations in the 102 counties previously mentioned.

At the time the plan was made there was reason to believe that it would be successful, and it is now certain that it was entirely feasible, but its full execution was prevented by its expensiveness, and by lack of the money which it was supposed Congress would supply. After the resources of the mail had been exhausted, outside of the South, special agents were employed to cure the greater deficiencies. For the purpose of discrediting the administration, many newspapers had endeavoured to damage the enumeration by virulent attacks on the office and its "inquisitorial" and "unconstitutional" questions, although at the same time they were employing reporters to ascertain for publication the most sacred of private affairs. In spite of this the mail brought a large percentage of returns, and special agents, with hardly a refusal, were able to obtain the information that they were seeking, almost entirely by application to debtors, and at dwellings, even in New York city, where the people had the most unfriendly feeling toward the Census Office. In this way unknown quantities were reduced to proportions which are not regarded as invalidating the conclusions that are made, although returns for all families were, after all, desired.

For the South the mail was not adopted, because of a large

population of ignorant blacks and poor whites; but it was tried experimentally and after a brief trial was abandoned, to be followed by the work of special agents. Within the limits of this article the peculiarities of the Southern field cannot be described, and in a general way it can only be said that at each Southern county seat the facts that were wanted by the Census Office can be ascertained more accurately than by application to the families themselves. Special agents supplemented the work of the enumerators until unknown quantities were reduced to less than 1 per cent. The Southern field work by special agents was done at the surprisingly low expense of about \$28,000, although the States embraced in this part of the nation contain a population of nearly 20,000,000.

Outside of the South, the effect of averages derived from actual returns and applied to unknown quantities, is an important matter in the results of this investigation. This was early perceived, and the returns of special agents were compared with the returns of the mail. The civil divisions in which supplementary work was done by special agents were those from which the returns by mail were exceptionally deficient, and as many of these were selected for special agents as the money at command would warrant. While it is true that average values and incumbrances in some cases differ materially, as between those derived from the mail alone and those derived from both mail and special agents, the percentages of incumbrance of value are generally not much different from each other. The amounts of debt and value were really less an object of the investigation than the relationship between them. Primarily the farm and home investigation is concerned with proprietorship, and takes account of incumbrance only to discover how far ownership is qualified by it, so that, notwithstanding errors in amounts of debt and value due to the application of averages, the decisive and ultimate object of inquiry, their relationship to each other, contains very little error. In the averages of the larger towns, the cities, the populous counties, and the States where their basis is broad and large, it is highly improbable that there are errors large enough to affect materially the true aggregates of incumbrances and values, for the reason that mortgaged farms and homes, under the prevailing circumstances, are confined within extremes of value that are not far apart; it is not easy to obtain a loan on the security of a holding of very small value, and the more valuable farms and homes are generally held by owners who do not want or need to incumber them. For these reasons the Census Office has been moderately content to accept the necessity of stopping the collection of facts where it did.

TABLE 1.—*Percentage of Unknown Families.*

States.	As to Proprietorship.		As to the fact of Incumbrance.		As to the Amounts of Incumbrance and Value, Rate of Interest, and Object of Debt.	
	For Farms.	For Homes.	For Farms.	For Homes.	For Farms.	For Homes.
Total for fourteen States....	0·87	1·51	0·92	1·53	13·81	23·02
Connecticut	1·67	1·65	1·64	1·64	20·14	20·48
District of Columbia	0·26	0·36	—	0·30	20·00	3·53
Georgia.....	0·41	0·40	0·39	0·36	1·45	2·04
Iowa	1·01	1·67	0·95	1·57	9·14	14·20
Maine	0·77	1·23	0·76	1·39	21·80	27·74
Maryland	2·32	3·05	2·24	2·99	25·49	32·80
Massachusetts	0·58	0·56	0·54	0·50	19·43	21·81
Montana	7·95	8·55	7·83	8·64	33·95	38·03
New Hampshire	1·58	2·35	1·57	2·31	20·50	23·42
New Jersey	1·65	3·09	1·65	2·73	25·41	31·39
Rhode Island	1·89	1·74	1·89	1·65	25·83	24·05
South Carolina.....	0·21	0·37	0·17	0·33	0·50	0·74
Tennessee	0·63	0·60	0·55	0·51	1·31	0·59
Vermont	1·23	1·84	1·17	1·77	14·58	20·75

Somewhat more than 2,000,000 families, composed of those reported by enumerators as owning their farms or homes under incumbrance, and those for which no reports were made, constituted the number with which the Census Office undertook to conduct a correspondence. None of them lived in the South, except in Maryland, West Virginia, and the District of Columbia. A thousand clerks should be employed in such an undertaking, but the Census Office could employ but 500, and lapse of time prevented the sending of more than two requests to delinquents, except that a third request was sent experimentally to about 100,000 families and found to be worth its expense. More than a year since the last request was sent out, returns were coming back, perhaps two or three a day. Had a much larger number of clerks been employed, returns from perhaps 5 to 10 per cent. of the families would have been received that were not obtained because of migration.

On the whole, the returns contained a comprehensible statement of the facts about which inquiry was made, although they sometimes had to be extracted from long accounts of personal history. It seemed as though all of the "cranks" in the country had been found, with their panaceas for debt and poverty. Less than 1 per cent. of the responses refused to give the information, or gave it with admitted reluctance, and these indicated the character of the people who wilfully neglected to respond. The inference is that they were the persons who always "beg to differ

with you," perhaps in gentlemanly terms, perhaps not; arrogant employers, lawyers ready for a contest, ignorant and belligerent men with a little mortgaged or tenant holding. The refusals were sometimes accompanied with obscene or blasphemous language, or expressed in bad English and a curious spelling of words. But, as before said, the proportion of these persons was exceedingly small. The failure of the mail to bring responses was more especially confined to the newer parts of the United States, with their drifting population, and to counties, towns, and city wards, containing a large proportion of inhabitants of foreign birth.

As a general conclusion in regard to the methods to be employed in statistical investigations such as these, it may be said that it is first desirable to make up a list of persons of whom questions are to be asked, without coming in contact with the people at all, as in the case of the mortgage investigation; or, if necessary to do so, without asking them the more touchy questions, as in the case of the farm and home investigation. It may be that discreet special agents could ascertain the amount of recorded debts, unprepared with a working list, by making one house to house canvass, if they could find at home the persons who could answer their questions. While this now seems probable, the "if" is a fatal objection. At any rate, the special agents should be men of tact and resources, and familiar with public records and local customs. Such investigations, also, should be connected with others as little as possible, and should depend upon efforts in various directions. By laying the groundwork of the investigation with a schedule used in a general enumeration, as was done in the farm and home investigation, interesting particulars of description of owners, and heads of hiring families, may be secured, such as age, sex, race, nativity, occupation, citizenship, and number of years in the country, if foreign born.

In magnitude the two investigations that have been described are as large as any entire United States census previous to that of 1870, and greater than any census previous to the one taken in 1850. The printing and the mere manual labour of handling the blanks that were used, numbering a little over 50,000,000, alone constituted an undertaking of great proportions.

Results for Real Estate Mortgages.

Although the report will not be issued until 1894, the tabulation completed at the present writing, represents the different conditions prevailing in various parts of the country, and permits some interesting conclusions. But until the tabulation is completed it may not be safe to draw conclusions freely. The mortgage movement for ten years in sixteen States is exhibited in the following table:—

TABLE 2.—*The Mortgage Movement of Ten Years in Sixteen States.*

Years.	Number of Mortgages.	Amount.
		\$
Total for sixteen States.....	4,816,193	5,387,696,805
1880.....	335,281	318,066,792
'81.....	371,795	389,463,049
'82.....	407,545	452,109,189
'83.....	428,194	467,050,540
'84.....	451,181	488,128,767
'85.....	504,376	519,988,354
'86.....	548,436	596,942,585
'87.....	603,354	713,575,284
'88.....	563,371	685,724,222
'89.....	602,660	756,648,023

The preceding table includes about half of the mortgages made in the United States during the ten years 1880-89, and reveals a progressive movement, that has far outstripped the growth of population. The increase of real estate value has not kept pace with the debt, although what the increase of that value has been is not known. A better understanding of the increase of this debt may be had upon its subdivision into the debt that incumbers acre tracts, and that which incumbers lots, as shown in the next table:—

TABLE 3.—*The Mortgage Movement with reference to Acre Tracts and Lots.*

Years.	Mortgages on Acre Tracts.		Mortgages on Lots.	
	Number.	Amount.	Number.	Amount.
		\$		\$
Total for 15 States *	2,089,468	1,992,274,084	1,688,117	2,029,385,284
1880	167,591	131,249,899	89,255	94,770,219
'81	179,858	156,106,233	110,598	128,186,859
'82	192,919	180,179,085	126,393	151,629,845
'83	195,803	188,604,010	137,062	157,115,226
'84	201,234	193,864,222	145,123	162,912,791
'85	226,357	206,194,182	164,550	181,015,228
'86	244,327	230,980,540	193,963	231,266,445
'87	241,643	260,777,917	246,682	305,915,799
'88	218,086	212,700,171	225,282	278,184,798
'89	221,650	231,617,825	249,209	338,388,074

* Pennsylvania omitted.

It is now apparent that the growth of cities has led to most of the increase in mortgage debt, and, if suburban tracts, mining lands, and other non-agricultural real estate could be separated from the acre tracts, it is probable that the debt connected with agriculture would show hardly any increase—almost surely so

outside of the States where much public land was acquired by farmers during the ten years.

The existing mortgage debt in the sixteen States amounts to \$2,520,426,638. Excluding Pennsylvania, where a classification by acres and lots could not be made, 48·30 per cent. of the debt incumbers acre tracts, and 51·70 per cent. lots. Details for the States, and some ratios, are in the following tables:—

TABLE 4.—*Number and Amount of Real Estate Mortgages in Force 1st January, 1890, in Sixteen States.*

States.	Number.	Amount.
		\$
Total for sixteen States	2,354,269	2,520,426,638
Alabama	35,331	39,027,983
Connecticut	57,996	79,921,071
Illinois	297,247	384,299,150
Indiana	171,420	110,730,643
Iowa	252,539	199,774,171
Kansas.....	298,880	243,146,826
Maine	58,851	32,627,208
Massachusetts.....	178,202	323,277,668
Missouri	192,028	214,609,772
Nebraska.....	155,377	132,902,322
New Hampshire.....	25,189	18,968,259
Oregon	22,553	22,928,437
Pennsylvania	513,403	613,105,802
Rhode Island	21,395	36,778,243
Tennessee	39,470	40,421,396
Vermont	34,388	27,907,687

TABLE 5.—*Number and Amount of Mortgages in Force against Acre Tracts and Lots in Fifteen States.*

States.	Against Acre Tracts.		Against Lots.	
	Number.	Amount.	Number.	Amount.
		\$		\$
Total for fifteen States	996,889	921,317,429	843,977	986,003,407
Alabama	27,041	28,762,387	8,290	10,265,596
Connecticut	12,311	13,176,736	45,685	66,744,335
Illinois	128,986	165,289,112	168,261	219,010,038
Indiana	106,155	74,553,217	65,265	36,177,426
Iowa	171,441	149,457,144	81,098	50,317,027
Kansas	203,312	174,720,071	95,568	68,426,755
Maine	30,985	14,150,646	27,866	18,476,562
Massachusetts	33,385	42,441,247	144,817	280,836,421
Missouri	103,161	101,718,625	88,867	112,891,147
Nebraska	107,175	90,506,968	48,202	42,395,354
New Hampshire	14,557	9,430,540	10,632	9,537,719
Oregon	16,250	15,983,361	6,303	6,945,076
Rhode Island	2,640	5,262,243	18,755	31,516,000
Tennessee	17,196	16,425,144	22,274	23,996,252
Vermont	22,294	19,439,988	12,094	8,467,699

TABLE 6.—*Number of Acres and Lots incumbered by Mortgages in Force in Fifteen States.*

States.	Acres.	Lots.
Total for fifteen States	104,525,202	1,377,660
Alabama	5,997,613	14,189
Connecticut	440,360	40,416
Illinois.....	10,660,987	286,148
Indiana	6,822,499	94,239
Iowa	16,307,145	163,674
Kansas.....	26,577,522	265,341
Maine	4,092,296	28,989
Massachusetts.....	920,313	132,683
Missouri	10,159,021	155,441
Nebraska	14,085,290	94,772
New Hampshire.....	1,151,143	10,455
Oregon.....	2,528,820	15,360
Rhode Island	96,546	30,815
Tennessee	3,018,045	32,896
Vermont	1,667,602	12,242

TABLE 7.—*Ratios to Number of Assessed Acres and Lots, Value and Population in Sixteen States.*

States.	Percentage of Number Mortgaged of Number Assessed.		Percentage of Debt in Force against Acres of estimated True Value of the Mortgaged Acres.	Per Capita Mortgage Debt.
	For Acres.	For Lots.		
Total	36·33	23·97	43·05	\$ 95
Alabama	21·63	—	53·52	26
Connecticut	17·70	—	—	107
Illinois	30·78	26·14	43·13	100
Indiana	30·38	—	30·58	51
Iowa	46·95	—	38·25	104
Kansas	61·56	21·24	47·53	170
Maine	—	—	—	49
Massachusetts	20·49	—	—	144
Missouri	25·41	28·98	58·31	80
Nebraska	58·13	20·41	44·47	126
New Hampshire	—	—	—	50
Oregon	31·69	—	32·58	73
Pennsylvania.....	—	—	—	117
Rhode Island	—	—	—	106
Tennessee	11·65	—	50·02	23
Vermont	31·86	—	—	84

Alabama and Tennessee are the only representatives of the South among these States. In the other Southern States, there has been no such industrial and urban development within recent years as there has been in these two, and it may be expected that the ratios exhibited for the latter are larger than the ratios that will be found in the others. Compared with other parts of the United States, the South is somewhat of a stranger to real estate mortgages, owing to low values, deficient enterprise, the excessive

production of cotton, and the tenant and crop lien systems. In Alabama 37·90 per cent. of the existing mortgage debt is on real estate in one mining and manufacturing county; in Tennessee 67·19 per cent. is in four of the more active and populous counties. In the South, debt burden is more especially felt in the crop liens, which nearly equal the value of the entire cotton and tobacco crops, and which are estimated to have amounted to about \$350,000,000 in 1890.

In the West the making of a real estate mortgage is a common neighbourhood affair. Mortgages have supplied a large proportion of the agricultural capital employed by settlers in the newer parts, and have contributed much to urban growth, besides being a consequence of such growth. Too much analysis is required for the space at command, and too many comparisons and descriptions of cities, counties, and States, to characterise in detail the great mortgage debt shown in the preceding tables. Perhaps the best that can be done within the limits of brevity is to show why this debt was incurred in the counties in some of these States where the objects of the debt were ascertained. Fairly representative States and counties are selected.

TABLE 8.—*Objects of Real Estate Mortgage Debt in selected Counties, by Percentages.*

States and Counties.	Purchase of Real Estate.	Purchase of Real Estate and Improvements.	Purchase, Improvements, and Personal Property.	Total Existing Debt.
				\$
Total for 17 counties.....	58·38	83·29	94·31	93,576,578
Alabama—				
Greene.....	47·97	55·71	71·16	159,831
Jefferson.....	67·29	92·32	95·95	14,792,189
Illinois—				
Bureau.....	62·16	78·29	85·39	4,766,139
Iroquois.....	79·71	92·25	95·92	4,368,311
Jasper.....	52·66	66·82	86·46	500,271
Morgan.....	60·10	78·59	92·16	2,669,183
Kansas—				
Decatur.....	30·80	51·96	69·62	1,099,223
Jefferson.....	65·34	77·92	95·79	1,317,029
Lincoln.....	47·02	69·59	88·26	1,692,940
Lyon.....	50·43	69·69	87·82	3,442,133
Pawnee.....	50·10	77·71	89·70	1,578,666
Massachusetts—				
Franklin.....	55·68	81·74	92·48	3,144,678
Hampden.....	55·97	88·20	96·09	19,547,915
Pennsylvania—				
Chester.....	69·18	87·56	98·08	13,974,859
Lackawanna.....	33·06	71·28	93·57	11,223,173
Lebanon.....	69·16	89·64	98·04	4,108,313
Washington.....	57·01	75·43	93·85	5,191,725

"Personal property," used as one of the terms of classification, includes farm machines, domestic animals, vehicles, merchants' goods and the like, and does not include such articles as are ordinarily understood to be farm and family supplies, nor medicines, food, clothing, and so forth. In the practical work of classification the distinction was more easily made than can be described; the underlying purpose was to exclude necessities and articles soon to be consumed. Among the classes adopted by the Census Office and not reproduced in this table are combinations of the objects mentioned with others not here mentioned. For instance, a mortgage made to enable the debtor to buy cattle and to discharge his indebtedness to a merchant for food, clothing, &c., is not included in the table. Combinations of objects are bewildering in the newer parts of the country, and the office was afraid of the difficulty of apportioning the debt to the various objects. Therefore, the preceding percentages are too small, but generally not considerably so.

When an attempt is made to interpret mortgage debt by its purposes, a wide field is opened for discussion, but little of which can be indulged in here. These are psychological statistics, calling for an analysis of conflicting motives and, in the ultimate discussion, leading to the questions of free will and psychical necessity. Within the confines of popular language, it may be said that real estate mortgage debt in the United States is mostly free from compulsion. It is not generally a debt which in its origin indicates a deterioration of individual welfare. There is acquired an equivalent of enduring wealth, or, if not, then wealth enduring sufficiently to be replaced in its use. In their inception mortgages are a means of the distribution of the use and enjoyment of wealth.

But the fate of the debtors is another question. This has gone into politics and has implicated the protective tariff, the gold standard of value and various matters of legislation and want of legislation—indeed, matters beyond the power of the Acts of Congress have had their effects, such as deficient rainfall, crop destroying insects, agricultural overproduction, crazy speculation in real estate values, the want of reasonable foresight on the part of debtors and their lack of thriving ability in the management of more wealth than they can earn and save.

At one time there was considerable dissatisfaction in a powerful association of farmers, because the Census Office had not undertaken by statistical methods to prove that calamitous conditions are evidenced by the experience of mortgage debtors. Within the limits of foreclosures, the attempt might have been made, had Congress appropriated another million dollars for expenses. In

two States, however, bureaus of labor statistics ascertained the number of foreclosures in one year on acre tracts of land—Illinois for 1887 and New Jersey for 1888—and these were found to be 0·77 per cent. of the number of farms cultivated by owners in Illinois, and 0·78 per cent. in New Jersey. The comparison is perhaps fairer than it would be if made with the total number of owned and hired farms. At any rate the occupation death-rate of farmers in these two States is less than that of persons, partnerships and corporations engaged in financial, mercantile and manufacturing occupations, whose occupation death-rate is about 1 per cent. annually, if insolvents alone are included, or about 10 or 11 per cent., if solvents and insolvents are included.

While difficult to ascertain, the rate of interest on real estate mortgages has probably declined less than 1 per cent. in the United States during the ten years beginning with 1880. Annual averages as ascertained for sixteen States are shown in the table that follows:—

TABLE 9.—*Average Rates of Interest on Real Estate Mortgages for Ten Years in Sixteen States.*

States.	Average.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.
Total for sixteen States....	6·82	7·07	6·84	6·78	6·80	6·86	6·91	6·91	6·93	6·68	6·60
Alabama	8·30	9·16	8·94	8·95	8·96	8·64	9·07	8·72	7·58	7·97	8·08
Connecticut	5·69	5·91	5·77	5·76	5·74	5·77	5·71	5·55	5·62	5·62	5·54
Illinois.....	6·78	7·39	6·96	6·77	6·84	6·92	6·87	6·69	6·67	6·68	6·53
Indiana	6·88	7·13	6·86	6·84	6·87	6·97	7·03	6·94	6·81	6·84	6·67
Iowa	7·74	8·29	7·94	7·80	7·73	7·71	7·83	7·68	7·59	7·62	7·48
Kansas.....	8·83	9·47	9·20	8·98	8·97	8·89	8·86	8·86	8·71	8·80	8·48
Maine	6·15	6·27	6·11	6·13	6·16	6·18	6·16	6·11	6·13	6·13	6·18
Massachusetts.....	5·51	6·06	5·80	5·63	5·63	5·56	5·48	5·29	5·37	5·47	5·35
Missouri	7·80	8·39	8·11	7·97	7·96	8·01	8·02	7·81	7·71	7·61	7·33
Nebraska.....	8·38	8·82	8·83	8·42	8·41	8·38	8·64	8·50	8·34	8·28	8·04
New Hampshire	5·98	5·99	5·97	5·99	5·98	5·98	5·99	5·97	5·96	5·98	5·98
Oregon	9·63	10·71	9·85	9·57	9·52	9·62	9·69	9·64	9·38	9·52	9·42
Pennsylvania	5·67	5·87	5·77	5·72	5·70	5·76	5·70	5·62	5·64	5·44	5·65
Rhode Island	5·76	6·23	5·74	5·77	5·85	5·82	5·69	5·60	5·68	5·71	5·69
Tennessee	6·00	6·01	6·01	6·00	6·02	6·00	6·00	6·00	5·99	6·00	6·00
Vermont	5·96	5·81	5·99	5·99	5·99	5·98	5·97	5·99	6·00	5·99	5·93

Slightly higher rates were generally found in mortgages on acre tracts than in mortgages on lots, except in some of the newer parts of the country, where speculation in town lots has involved more risk than agriculture has. The varied rates found among the different regions are due to differences of risk, of local custom and of number of lenders, more than to a relation between the demand for loan wealth and the amount of its supply.

In its general results the investigation of real estate mortgages has shown a relationship between mortgage activity and the development of business and cities. There may have been much miscalculation in the ventures of the debtors, but for this mortgages were not responsible. Behind the purposes of the indebtedness however remains the question whether a possibly increasing relative concentration of wealth is not ultimately the cause of much of the indebtedness, but the question can hardly be answered by more than inferences, and not without an extension of statistical inquiries.

Since the indebtedness and the number of debtors probably more than doubled within ten years, while population increased about one-fourth, and wealth one-half, and since the debt was mostly incurred to secure purchase price and to pay for improvements, is it not inferable that the real estate purchasers and improvers of 1880 were more able to make full payment than those of 1889? If so, is the inference to be explained by saying that the value of the individual purchases and improvements has increased, or that a relatively larger poorer class of men ventured to purchase and improve in 1889 than in 1880? And if a poorer class, has it been augmented by a concentration of wealth which has compelled purchasers and improvers more generally to mortgage; or does it indicate a diffusion of wealth, which has raised up a relatively larger class of men who, with the aid of mortgages, have been able to buy real estate and to erect buildings? The answers require more information than is at hand; but until sufficient information is obtained, the suspicion will remain that individual wealth has declined in relation to the values of land holdings and buildings.

Results of Investigation of Farm and Home Proprietorship.

For thirteen States and the District of Columbia, representing the various parts of the United States, except the Pacific coast, the tabulation has been completed. In these civil divisions there are 2,913,959 families, which are 22.96 per cent. of the families of the Union; 32.70 per cent. of the 2,913,959 families cultivate farms, and 67.30 per cent. occupy homes. The percentages in the following table express proportions of the classes described:—

TABLE 10.—*Percentage of Families Occupying Owned and Hired and Free and Incumbered Farms and Homes for Fourteen States.*

FOR FARMS AND HOMES.

States.	Percentage of Families Owning and Hiring.		Percentage of Families Owning Free and Incumbered of Total Owning Families.		Percentage of Families Owning Free and Incumbered of Total Owning and Hiring Families.	
	Owning.	Hiring.	Free.	Incumbered.	Free.	Incumbered.
Total for fourteen States	42·73	57·27	71·98	28·02	30·76	11·97
Connecticut	41·58	58·42	58·65	41·35	24·39	17·19
District of Columbia..	25·53	74·47	76·42	23·58	19·51	6·02
Georgia	31·43	68·57	96·82	3·18	30·43	1·00
Iowa	63·18	36·82	57·60	42·40	36·39	26·79
Maine	66·35	33·65	78·23	21·77	51·90	14·45
Maryland	38·19	61·81	72·90	27·10	27·84	10·35
Massachusetts	36·49	63·51	62·15	37·85	22·68	13·81
Montana	53·75	46·25	86·44	13·56	46·46	7·29
New Hampshire	55·89	44·11	76·57	23·43	42·79	13·10
New Jersey	35·66	64·34	54·16	45·84	19·31	16·35
Rhode Island	29·62	70·38	65·87	34·13	19·51	10·11
South Carolina.....	28·77	71·23	92·47	7·53	26·60	2·17
Tennessee	45·00	55·00	96·13	3·87	46·26	1·74
Vermont	61·40	38·60	58·82	41·18	36·11	25·29
FOR FARMS.						
Total for fourteen States	61·84	38·16	74·09	25·91	45·82	16·02
Connecticut	82·32	17·68	68·90	31·10	56·72	25·60
District of Columbia..	62·53	37·47	95·87	4·13	59·95	2·58
Georgia	41·90	58·10	96·62	3·38	40·48	1·42
Iowa	70·43	29·57	46·71	53·29	32·90	37·53
Maine	92·38	7·62	77·91	22·09	71·97	20·41
Maryland	62·77	37·23	69·99	30·01	43·93	18·84
Massachusetts	84·94	15·06	69·54	30·46	59·07	25·87
Montana	86·60	13·40	84·42	15·58	73·11	13·49
New Hampshire	89·08	10·92	78·21	21·79	69·67	19·41
New Jersey	67·89	32·11	51·09	48·91	34·69	33·20
Rhode Island	75·00	25·00	80·95	19·05	60·71	14·29
South Carolina.....	38·51	61·49	92·00	8·00	35·43	3·08
Tennessee	58·12	41·88	96·79	3·21	56·25	1·87
Vermont	82·38	17·62	55·65	44·35	45·85	36·53
FOR HOMES.						
Total for fourteen States	33·45	66·55	70·08	29·92	23·44	10·01
Connecticut	33·85	66·15	53·93	46·07	18·26	15·59
District of Columbia..	25·20	74·80	75·99	24·01	19·15	6·05
Georgia	21·00	79·00	97·22	2·78	20·41	0·59

TABLE 10.—*Percentage of Families Occupying Farms and Homes—Contd.*

States.	Percentage of Families Owning and Hiring.		Percentage of Families Owning Free and Incumbered of Total Owning Families.		Percentage of Families Owning Free and Incumbered of Total Owning and Hiring Families.	
	Owning.	Hiring.	Free.	Incumbered.	Free.	Incumbered.
Iowa	55·04	44·96	73·24	26·76	40·31	14·73
Maine	48·02	51·98	78·66	21·34	37·77	10·25
Maryland	31·87	68·13	74·37	25·63	23·70	8·17
Massachusetts	32·72	67·28	60·67	39·33	19·85	12·87
Montana	43·70	56·30	87·66	12·34	38·31	5·39
New Hampshire	39·27	60·73	74·70	25·30	29·33	9·94
New Jersey	31·93	68·07	54·92	45·08	17·54	14·39
Rhode Island	26·03	73·97	62·44	37·56	16·25	9·78
South Carolina.....	17·93	82·07	93·57	6·43	16·78	1·15
Tennessee	28·98	71·02	94·52	5·48	27·39	1·59
Vermont	45·61	54·39	63·11	36·89	28·79	16·82
FOR HOMES IN TOWNS AND CITIES OF 8,000 TO 100,000 PEOPLE.						
Total for thirteen States	29·99	70·01	61·35	38·65	18·40	11·59
Connecticut	28·70	71·30	48·59	51·41	13·94	14·76
Georgia	19·74	80·26	94·54	5·46	18·66	1·08
Iowa	45·32	54·68	64·52	35·48	29·24	16·08
Maine	36·23	63·77	81·73	18·27	29·61	6·62
Maryland	38·46	61·54	67·01	32·99	25·77	12·69
Massachusetts	31·25	68·75	55·71	44·29	17·41	13·84
Montana	31·71	68·29	69·74	30·26	22·11	9·60
New Hampshire	29·02	70·98	75·28	24·72	21·84	7·18
New Jersey	27·19	72·81	51·27	48·73	13·94	13·25
Rhode Island	27·04	72·96	57·80	42·20	15·63	11·41
South Carolina.....	21·62	78·38	88·08	11·92	19·04	2·58
Tennessee	20·28	79·72	91·48	8·52	18·55	1·73
Vermont	41·95	58·05	53·82	46·18	22·58	19·37
FOR HOMES IN CITIES OF MORE THAN 100,000 PEOPLE.						
Total for five States.....	22·07	77·93	67·25	32·75	14·84	7·23
District of Columbia	25·20	74·80	75·99	24·01	19·15	6·05
Maryland	26·06	73·94	75·62	24·38	19·71	6·35
Massachusetts	18·43	81·57	61·18	38·82	11·27	7·16
New Jersey	20·51	79·49	57·07	42·93	11·71	8·80
Rhode Island	20·74	79·26	62·01	37·99	12·86	7·88

TABLE 10.—*Percentage of Families Occupying Farms and Homes—Contd.*

FOR HOMES OUTSIDE OF TOWNS AND CITIES OF MORE THAN 8,000 PEOPLE.

States.	Percentage of Families Owning and Hiring.		Percentage of Families Owning Free and Incumbered of Total Owning Families.		Percentage of Families Owning Free and Incumbered of Total Owning and Hiring Families.	
	Owning.	Hiring.	Free.	Incumbered.	Free.	Incumbered.
Total for thirteen States	39·40	60·60	74·94	25·06	29·52	9·88
Connecticut	41·05	58·95	59·15	40·85	24·28	16·77
Georgia	21·38	78·62	97·97	2·03	20·95	0·43
Iowa	59·13	40·87	76·06	23·94	44·98	14·15
Maine	53·11	46·89	77·75	22·25	41·29	11·82
Maryland	38·64	61·36	73·96	26·04	28·58	10·06
Massachusetts	45·76	54·24	66·81	33·19	30·57	15·19
Montana	47·14	52·86	91·11	8·89	42·95	4·19
New Hampshire	45·00	55·00	74·49	25·51	33·52	11·48
New Jersey	43·25	56·75	56·11	43·89	24·27	18·98
Rhode Island	35·96	64·04	70·54	29·46	25·37	10·59
South Carolina	17·28	82·72	94·78	5·22	16·38	0·90
Tennessee	32·24	67·76	95·24	4·76	30·71	1·53
Vermont	46·13	53·87	64·30	35·70	29·66	16·47

It is probable that a little less than half of the families of the United States own their habitations. This is indicated by the average of a representative combination of States. *A priori* conclusions were at variance with these results. It was supposed that in a country where land is plentiful and cheap, its transfer unimpeded and its market active, most of the families must be owners of their habitations. To show how frequently land is bought, attention may be directed to Hampden county, Massachusetts, an old county with a population of 135,713, and with manufactures predominant. The transfers of real estate by unconditional deeds in the year 1889, averaged 1 to 8·93 of the families of 1890, and in the ten years 1880-89 they averaged 1 to 1·03 of the families of 1885; yet 66·28 per cent. of the families of the county hire their habitations. Some counties would show higher ratios and others lower ones, but in nearly all of them real estate is not less easily bought.

Evidences of well-being, so apparent in the United States, were opposed to such conclusions as have been established by the Census Office, and these evidences combined with the freedom with which land may be bought, call for an attempt to reconcile the probability with the fact. Our inherited love of home, our literature, our sentiments, our traditional dislike of tenancy, will throw doubt upon any explanation that will be offered, except that of poverty. As will subsequently be shown, poverty, relative to farm and home

values, is largely the reason why tenancy is proportionally so great, but there are other explanations of considerable importance. European travellers in the United States speak of the unrest that they notice, but which is too common to be noticed by the inhabitants. The varied and numerous opportunities of a large and rapidly developing country, made known through habits of travel, reading and writing, induce a prevalent migration, which is the more readily undertaken when the means of transportation are cheap and convenient. Apparently the people possess weak local attachments; migration seems to be a matter of better prospects, and these are readily, often illusively and vaguely, discovered. After migration, home ownership is not desirable until permanent interests have been established.

The possible necessity of migration is another reason why habitations are not owned. Home ownership is an anchor against migration, and with many persons employment is too uncertain to make it advisable to tie to such an anchor. There is some loss of independence in dealing with an employer if a working man or even a college professor owns his home.

Then again a high and more ambitious style of living stands in the way of home owning. Earnings are quite as likely to be expended for living as for the purchase of a home, and practically the superior gratification of the preference is not questioned, although sentimentally it is questioned. In connection with this it may be allowable to quote from an article by the writer, published in the "North American Review" for January, 1893:—

"In comparing the two classes of owning and hiring families
"with each other, it may be that the units are unlike; in counting
"an owned against a hired home, it may be that greater weight in
"the comparison is given to the owned cabin of the negro labourer
"than to the vastly more comfortable and pretentious hired dwell-
"ing of the merchant or lawyer. The families in a State in which
"the proportion of hiring families is great may be much more
"happily situated than the families in a State where the propor-
"tion is much less. Even if the values of the farms and homes
"occupied by the two classes of families were known, still there
"might be the qualification that, notwithstanding values, residence
"in hired homes in some regions is accompanied by greater welfare
"and happiness than are found in owned homes in other regions.

"In other respects also these statistics somewhat misrepresent
"the people in regard to welfare and social condition. It does not
"follow that a tenant family, because of tenancy, is not well cared
"for and in the receipt of an income sufficient for comfort and
"even many enjoyments and luxuries. Nor does it follow that a
"tenant family is unable to own a home, especially under mort-

“gage, because of poverty, although this may be the inference in the case of the farm hiring families.”

That tenancy has lately been increasing in the United States is probable; in the case of farms it is certain. The census of 1880 ascertained the proprietorship of farms, with the farm as the statistical unit. Owing to differences of scope and classification, the farm units of that census may not be compared with the farm family units of 1890 with entire fairness; yet the general character of the comparison can hardly be contested. The comparison stands thus:—

TABLE 11.—*Farm Tenancy, 1880 and 1890.*

States.	Percentage of Hired Farms, 1880.	Percentage of Farm Hiring Families, 1890.
Total for fourteen States	28·78	38·16
Connecticut	10·22	17·68
District of Columbia	38·16	37·47
Georgia	44·85	58·10
Iowa	23·83	29·57
Maine	4·32	7·62
Maryland	30·95	37·23
Massachusetts	8·18	15·06
Montana	5·27	13·40
New Hampshire	8·13	10·92
New Jersey	24·60	32·11
Rhode Island	19·88	25·00
South Carolina	50·31	61·49
Tennessee	34·53	41·88
Vermont	13·41	17·62

In connection with this table it may be stated that in the States mentioned the number of farm owning families in 1890 was 589,231, or 4·63 per cent. less than the number of owned farms in 1880, which was 617,854, and that the number of farm hiring families in 1890 was 363,526, or 45·62 per cent. greater than the number of hired farms in 1880, which was 249,647. Whatever error there is in the comparison is probably due to the failure of the enumerators to report all of the hired farms in 1880.

While farm ownership is preferable to tenancy, it should be borne in mind that most of the native farm tenants have risen from the status of farm labourers, and that the others are recently arrived immigrants from Europe. The loss to the farm is the reluctance of the owner to cultivate it and his migration to the town. It is a question whose answer is not certain whether the gain to the tenant and to the town is, after all, a general gain as against the loss to the farm.

Farm cultivation by tenants is everywhere regarded in the United States as inferior to cultivation by owners. The tenancies are generally those that are known to the common law as tenancies at will, and endure only from year to year. The tenants see their opportunities to gain by exploitation, and have a large liberty to do so. They shift from farm to farm, sometimes tenants and sometimes labourers, and in the South live on the prospects of the next crop until it is harvested, by means of advances from merchants. Tenant cultivation, as it is practised North and South, is recognised as a step in farm decadence.

Whether home tenancy is relatively increasing can only be inferred. The higher percentage of home tenancy in towns and cities of 8,000 people and over than outside of them may be noticed in Table 10. The towns and cities of this class in the United States contained 12·49 per cent. of the population in 1850, 22·57 per cent. in 1880, and 29·20 per cent. in 1890. The percentage has been increasing since the first census, in 1790, and is likely to increase during an indefinite future. Whether there is a decreasing tenancy outside of such towns and cities sufficient to overbalance, or even to balance, the increase within them, is not known, but it is improbable, although the percentage of decrease of tenancy outside of them need not be great in order to produce a general increase of home ownership throughout the population at large.

How far the ownership of incumbered farms and homes is affected by the debt is shown in the following table:—

TABLE 12.—*Percentage of Incumbrance of Value for Owned and Incumbered Farms and Homes in Fourteen States.*

States.	Total.	For Farms.	For Homes.
Total for fourteen States	39·97	37·09	42·27
Connecticut.....	42·64	40·64	43·14
District of Columbia	34·56	32·78	34·57
Georgia	42·16	41·89	42·59
Iowa	33·27	33·29	33·17
Maine	36·95	36·68	37·24
Maryland	39·19	38·49	39·94
Massachusetts.....	44·68	41·88	45·03
Montana	33·69	31·69	36·08
New Hampshire.....	37·84	38·44	37·35
New Jersey.....	44·95	49·64	43·35
Rhode Island	44·16	42·59	44·31
South Carolina	49·23	50·24	46·86
Tennessee	42·09	40·13	44·63
Vermont	40·21	41·76	37·20

Disagreement between the farm ratio of debt to value in this investigation, and the acre tract ratio in the investigation of real estate mortgages is inevitable. The farm values were ascertained by accepting the opinion of owners in the North, and of county officers, generally, in the South, each farm being the subject of a separate estimate. But in the case of acre tracts, the tax assessors' valuation of all of the taxed acre tracts in each county, including improvements, was increased by an allowance for undervaluation made in accordance with a general concensus of opinion derived from reports received from public officers and men most familiar with the supposed undervaluation. The estimated true value of the taxed acre tracts in a State having been thus established, their average value was given to the mortgaged acres. Such a crude process was the only available one, and it seems to have produced somewhat lower farm valuations than were derived from the farmers themselves; or it may be that acre tracts not included in mortgaged farms cultivated by owners are more heavily incumbered than those farms are. It may be presumed that farmers are likely to overvalue their farms when they can do so without the knowledge of assessors, and that disinterested persons have a more accurate opinion. At the same time any conclusions derived from assessors' valuations in the United States, no matter by what process, can be no better than rough approximations to the facts. Yet the different valuations of the two investigations are not so divergent as to call for the rejection of either or both of them.

The amounts of the farm and home values and incumbrances, and the actual rates of interest, are classified in the tabulation of the Census Office, but, for want of space, only averages are presented in the following tables:—

TABLE 13.—*Average Value, Incumbrance, Annual Interest Charge and Rate of Interest for Farms and Homes occupied by Owners and Incumbered for Fourteen States.*

FOR FARMS AND HOMES.				
States.	Average Value of each Incumbered Farm or Home.	Average Incumbrance on each Farm or Home.	Average Annual Interest Charge on each Farm or Home.	Average Annual Rate of Interest.
Total for fourteen States	\$ 3,378	\$ 1,350	\$ 83	6·17
Connecticut	3,734	1,592	87	5·47
District of Columbia	7,047	2,436	146	5·99
Georgia	1,852	781	64	8·16
Iowa	3,452	1,148	85	7·42
Maine	1,608	594	37	6·17

TABLE 13.—*Average Value, &c., for Farms and Homes occupied—Contd.*

States.	Average Value of each Incumbered Farm or Home.	Average Incumbrance on each Farm or Home.	Average Annual Interest Charge on each Farm or Home.	Average Annual Rate of Interest.
	\$	\$	\$	
Maryland	3,056	1,197	70	5'82
Massachusetts	3,878	1,733	95	5'49
Montana	4,484	1,511	166	10'97
New Hampshire.....	2,140	810	48	5'92
New Jersey.....	4,052	1,821	103	5'64
Rhode Island.....	4,142	1,829	106	5'78
South Carolina	1,978	974	82	8'46
Tennessee	1,739	732	45	6'20
Vermont	2,261	909	54	5'90
FOR FARMS.				
Total for fourteen States	3,420	1,269	85	6'72
Connecticut	3,115	1,266	70	5'57
District of Columbia...	5,278	1,730	104	6'00
Georgia	1,627	681	57	8'33
Iowa	3,964	1,319	97	7'36
Maine	1,449	532	33	6'26
Maryland	4,251	1,636	95	5'79
Massachusetts	3,158	1,323	74	5'58
Montana	5,624	1,782	195	10'97
New Hampshire.....	1,940	746	44	5'91
New Jersey.....	4,891	2,428	138	5'69
Rhode Island.....	3,581	1,525	89	5'82
South Carolina	1,851	930	80	8'57
Tennessee	1,663	667	41	6'21
Vermont	2,405	1,004	59	5'88
FOR HOMES.				
Total for fourteen States	3,346	1,414	82	5'78
Connecticut	3,926	1,694	92	5'45
District of Columbia....	7,054	2,439	146	5'99
Georgia	2,396	1,020	80	7'89
Iowa	1,987	659	51	7'74
Maine	1,830	681	41	6'06
Maryland	2,346	937	55	5'85
Massachusetts	3,990	1,797	98	5'48
Montana	3,612	1,303	143	10'97
New Hampshire.....	2,336	873	52	5'92
New Jersey.....	3,829	1,660	93	5'62
Rhode Island.....	4,207	1,864	108	5'78
South Carolina	2,356	1,104	90	8'17
Tennessee	1,847	824	51	6'20
Vermont	2,026	754	45	5'94

TABLE 13.—*Average Value, &c., for Farms and Homes occupied—Contd.*

FOR HOMES IN TOWNS AND CITIES OF 8,000 TO 100,000 PEOPLE.

States.	Average Value of each Incumbered Farm or Home.	Average Incumbrance on each Farm or Home.	Average Annual Interest Charge on each Farm or Home.	Average Annual Rate of Interest.
Total for thirteen States	\$ 4,003	\$ 1,716	\$ 98	5'71
Connecticut	4,903	2,137	115	5'38
Georgia	3,188	1,262	97	7'71
Iowa	2,710	913	68	7'45
Maine	2,812	1,106	65	5'92
Maryland	2,855	1,057	60	5'65
Massachusetts.....	4,167	1,855	102	5'52
Montana	4,506	1,715	175	10'20.
New Hampshire.....	3,256	1,205	72	5'95
New Jersey.....	4,186	1,814	102	5'62.
Rhode Island.....	3,940	1,741	101	5'83
South Carolina	2,460	1,072	82	7'68.
Tennessee	2,543	1,201	75	6'23
Vermont.....	3,202	1,162	69	5'94
FOR HOMES IN CITIES OF MORE THAN 100,000 PEOPLE.				
Total for five States	5,229	2,306	126	5'45
District of Columbia...	7,054	2,439	146	5'99
Maryland	2,270	999	58	5'82
Massachusetts	7,026	3,386	174	5'14
New Jersey.....	5,154	2,249	122	5'44
Rhode Island.....	5,405	2,427	138	5'71
FOR HOMES OUTSIDE OF TOWNS AND CITIES OF MORE THAN 8,000 PEOPLE.				
Total for thirteen States..	2,394	971	59	6'07
Connecticut	2,726	1,149	65	5'62
Georgia	1,794	836	68	8'08
Iowa	1,640	537	43	7'97
Maine	1,592	579	35	6'13.
Maryland	2,350	874	52	5'91
Massachusetts.....	2,660	1,158	66	5'72
Montana	3,025	1,033	122	11'82
New Hampshire	2,014	756	45	5'90
New Jersey.....	3,224	1,393	79	5'70
Rhode Island.....	2,787	1,193	70	5'88
South Carolina	2,304	1,120	94	8'41
Tennessee	1,553	665	41	6'17
Vermont.....	1,831	686	41	5'94

As a sample of the various rates of interest borne by incumbrances on farms and homes, the next table is offered :—

TABLE 14.—*Number of Families occupying Owned and Incumbered Farms and Homes, and the Incumbrance thereon, in New Jersey, by Rates of Interest.*

Rates of Interest.	For Farms.		For Homes.	
	Number of Families.	Incumbrance.	Number of Families.	Incumbrance.
		\$		\$
Total for the State	10,607	25,755,096	39,786	66,029,089
0 per cent.	17	73,966	105	136,052
1 " 	—	—	1	4,000
1—2 " 	2	8,700	4	2,601
2 " 	1	800	3	2,828
2—3 " 	3	11,519	12	33,791
3 " 	16	20,634	44	63,177
3—4 " 	5	20,857	20	66,711
4 " 	52	181,918	253	424,891
4—5 " 	46	193,123	134	365,092
5 " 	2,132	5,953,606	9,572	22,171,556
5—6 " 	482	1,889,779	1,057	3,259,021
6 " 	7,696	17,125,945	27,796	38,565,995
6—7 " 	55	142,486	160	335,910
7 " 	73	106,794	400	376,178
7—8 " 	10	11,856	28	31,438
8 " 	7	8,920	55	58,945
8—9 " 	—	—	14	9,980
9 " 	—	—	27	30,300
9—10 " 	—	—	3	2,358
10 " 	4	1,468	55	56,082
10—11 " 	1	575	2	1,760
11 " 	1	100	6	4,464
11—12 " 	1	600	2	2,190
12 " 	1	300	22	18,077
12—13 " 	—	—	1	175
13 " 	—	—	1	400
13—14 " 	—	—	1	500
15 " 	—	—	5	3,142
15—16 " 	—	—	1	125
16 " 	1	550	—	—
17 " 	—	—	1	600
18 " 	—	—	1	300
30 " 	1	600	—	—
50 " 	—	—	1	450

The numbers contained in this article are not likely to be changed in their final official publication, but the Census Office makes the usual reservation in regard to changes in permitting publication at the present time.

These investigations are placing before the public a great variety and amount of material of a novel character, for use in the consideration of questions of political, economic, and social science.

It would be a poor return for their great labour and cost to provide nothing more than a few massive totals, which might be effective when hurled at audiences in political harangues, but which would be incomprehensible for want of analysis and comparison. In the tabulation little has been added to expense by considerable classification and sub-classification. Enough has been published to show many of the uses that may be made of these statistics. An application of some of the results of the farm and home investigation to the problem of the distribution of wealth will be an illustration.

No attempts to determine the degree of the distribution of wealth have heretofore been at all satisfactory, because they could not be otherwise than based on estimates of the wealth of the very rich, and on tax assessments, and such estimates allow too great latitude for bias. In the method now made possible for the first time, a new classification of wealth owners may be made, and attention directed toward the poorer classes, whose wealth is mostly in sight and may be the more safely connected with its owners.

For the purpose of getting certain averages that are presumably and approximately good for the United States, the States of Georgia, Iowa, Maine, Maryland, Massachusetts, Montana, and New Jersey, and the District of Columbia have been combined. The conclusion then is that 36 per cent. of the farm families, and 65 per cent. of the home families are tenants. Among the farm owning families 34 per cent. have incumbrances averaging \$1,345, and their farms are each worth \$3,704; an average debt of \$1,418 incumbers an owned home worth \$3,357, and the owned and incumbered homes are 31 per cent. of all of the owned homes. Until the census shall determine, it may be supposed that there are 4,750,000 farms in the United States, leaving 7,940,152 families that occupy homes that are not farms.

The method that is here employed first computes the number of tenant families, and allows \$150 above debts to each farm tenant family, and \$500 above debts to each home tenant family. For the South, containing nearly one-third of the nation's population, these allowances are undoubtedly too large; they may be too small for some States elsewhere.

In estimating the wealth of families that own their farms and homes under incumbrance, net values are employed, and those that are worth \$5,000 and over, without deduction of the incumbrance, are excluded, so that the poorer families may be selected. In these States the owned and incumbered farms worth less than \$5,000 are owned by 76 per cent. of the families owning incumbered farms of all values, and these farms are worth 46 per

cent. of the value of all farms cultivated by owners and subject to incumbrance. The corresponding figures for homes are 81 per cent. for families and 45 per cent. for value. An allowance of \$500 above an indefinite indebtedness is made to each family in the poorer class, besides the net farm or home value.

Greater uncertainty is encountered in handling the free farms and homes occupied by owners, because their values are not published; all that can be done is to adopt the figures representing the incumbered ones, and in respect to home families this probably makes the poorer class too large and also gives to it more home value than it possesses, if free homes are worth more than incumbered ones. To each free farm family of the poorer class \$1,000 is credited in addition to the farm value, and to each home family \$2,000, after deducting debts of an indefinite amount. The result of the computations and allowances follows:—

Wealth Distribution by Classes.

	\$
1,710,000 farm hiring families, worth \$150 above debts	256,500,000
785,536 families owning incumbered farms worth less than \$5,000, deducting incumbrance and other debts and allowing \$500 for additional wealth	1,514,368,704
1,524,864 families owning free farms worth less than \$5,000, allowing \$1,000 for additional wealth above debts	4,943,448,576
5,161,099 home hiring families, worth \$500 above debts	2,580,549,500
697,820 families owning incumbered homes worth less than \$5,000, deducting incumbrance and other debts and allowing \$500 for additional wealth	1,100,617,060
1,553,213 families owning free homes worth less than \$5,000, allowing \$2,000 for additional wealth above debts	6,003,168,376
<hr/> 11,432,532 families worth	<hr/> 16,398,652,216 <hr/>

The chief elastic element of the estimate is the amount of wealth that shall be credited to each family in addition to its farm or home, and the amount of debt with which the family shall be charged above incumbrance. Opinions will vary in these matters, but the variations from the adopted amounts will need to be extreme before the preceding conclusion can be considerably changed. In forming an opinion it should be borne in mind that only the cheaper of the owned farms and homes are represented, in no case worth as much as \$5,000 without regard to incumbrance and averaging about half that amount.

Since there were 12,690,152 families in the United States in 1890, and the estimated wealth of the country was about \$65,000,000,000, about three-fourths of the wealth is concentrated

among 1,257,620 families. Within this group there is a still further concentration, which may be indicated by taking account of the wealth of the very rich. The *New York Tribune's* list of 4,047 millionaires affords the best basis for this. Without going into details, the conclusion adopted in this article is that the 4,047 millionaires are worth not less than ten nor more than fifteen billions of dollars, or about one-fifth of the nation's wealth. This gives to each millionaire an average of about \$3,000,000.

We are now prepared to characterise the concentration of wealth in the United States by stating that 75 per cent. of the wealth is owned by 10 per cent. of the number of families and that 25 per cent. of the wealth remains to be owned by 90 per cent. of families. Excluding the millionaires, the richer 10 per cent. of the families own 55 per cent. of the wealth and the millionaires themselves, or three-hundredths of 1 per cent. of the families, own 20 per cent. of the wealth.

About 17 per cent. of the wealth is owned by the poorer families that own farms or homes without incumbrance, and these are 24 per cent. of the total families. Only 8 per cent. of the wealth is owned by the families that hire and the poorer ones that own their farms or homes under incumbrance, and these are 66 per cent. of all families. As little as 4 per cent. of the nation's wealth is owned by 54 per cent. of the families, or by the tenants. Finally, 4,047 families are worth four-fifths as much as 11,432,532 families are worth.

The effect of the method herein adopted is to place about three-fourths of the wealth of the country in the hands of the owners of farms and homes worth \$5,000 and over; excluding millionaires, their average wealth becomes about \$25,000, which at first seems an improbable possession for as many as 1,253,573 families, or for about 10 of 100 families; but the average family wealth, still omitting millionaires, is about \$4,000, so that about \$400,000 must find owners among each 100 families, 57 of which are tenants, 12 of which have incumbrances on their farms or homes of the cheaper sort, and 21 of which have farms or homes without incumbrance that are worth but a few thousand dollars each.

Collateral support for the foregoing conclusions is found in the probability that about one-quarter of the nation's wealth is in the hands of debtors. Until private debts are run through a clearing house, no one can say what the debts of the people of the United States amount to; a wholesale merchant owes a manufacturer, a retail merchant owes the wholesale merchant, customers owe the retail merchant, many of the customers are themselves creditors, and so debts and credits offset each other in a maze of financial

operations. It would be foolhardy to do more than to take the principal classes of private debt, the amount of which is known or may be estimated, perhaps without enormous error, and to regard their total as the minimum probable net debt.

In the following statement of private indebtedness for 1890, the item of "other private debts" is not an estimate, but is added to bring up the total to a round number and to account for part of the net debt of trade, manufactures, court judgments, professional services, and other debt not specifically mentioned. For such possible use as the reader may desire to make of it, the public debt of 1890 is added.

The Minimum Debt of the United States, 1890.

	\$
Grand total	18,027,170,546
Total private debt	16,000,000,000
Total debt of quasi-public corporations.....	5,000,000,000
Railroad companies (funded debt).....	4,562,336,508
Street railway companies (funded debt)	103,494,260
Telephone companies (funded debt)	4,992,565
Telegraph, public water, gas, electric light- ing and power companies (estimated) }	300,000,000
Other quasi-public corporations (to make round total)	29,176,667
Total debt of other private corporations and individuals..... }	11,000,000,000
Real estate mortgages (estimated)	6,000,000,000
Crop liens in the South (estimated)	350,000,000
Chattel mortgages (estimated)	300,000,000
National banks (loans and overdrafts)	1,986,058,320
Other banks (loans and overdrafts, not including real estate mortgages)..... }	1,172,918,415
Other private debts (to make round total)	1,191,023,265
Total public debt (less sinking fund)	2,027,170,546
United States	891,960,104
States	228,997,389
Counties.....	145,048,045
Municipalities	724,463,060
School districts.....	36,701,948

The foregoing figures bearing on the concentration of wealth indicate in a large degree the relationship of creditor and debtor, and employer and employée, among the people, and must provoke an examination of the fundamental character of the civilisation existing in the United States. That many of the causes of these results are transitory, and more especially peculiar to temporary

conditions that have been developed in the United States, is probable; but, even with the disappearance of these conditions, it is not certain that the future will restore the more even diffusion of wealth that once prevailed. The question of interest and profit is implicated, and future diffusion will depend on a checking of the growing consumption for immediate well-being on the part of the masses of the people, for the sake of saving and investing in order that interest and profit may add to accumulations.

The statistics of farm and home proprietorship call for further information for their interpretation. In explanation of the absolute as well as relative increase of farm tenancy, it is claimed that mortgage foreclosures are degrading cultivating owners to the status of tenants; but, as the principal cause of the increase, this cannot be admitted without additional statistical investigation, although the foreclosures in Illinois and New Jersey make room for the supposed fact. From general observation it may be said that there is some such degradation; but more prominently it is true that farm labourers, many of them immigrants from foreign countries, are acquiring tenancies, sometimes entirely taking the places of cultivating owners, and sometimes taking only portions of their farms, such opportunities being made by the diminution of the supply of cultivating owners from the sons of such owners, for which the superior attractions of trade, manufacturers, transportation, and town life are responsible. That more than half of the farm mortgages were made to secure unpaid portions of purchase price has been established, and consequently these mortgages have promoted ownership, or, if not, have given owners larger holdings than they would otherwise have had. Probably both inferences are sound.

Additional explanations are required for the South, with its proportionally large population of "poor whites" and blacks. The former slave owners and their sons, at the close of the civil war, were forced to go into debt and to establish a tenant system that has continued to the present time by its own inertia. The landlords are still making no apparent efforts to resume the cultivation of their plantations; on the other hand the number of cultivating owners is absolutely declining in three indicative States. Various explanations of this state of affairs are at hand, but they all go back to the want of adaptability of the owners, to the emancipation of the slaves, and to their want of industry and economy sufficient to repair the financial disasters of the war. The agricultural South is worse off to-day than it was before the war. The plantation owners have lost much of the independence that they formerly enjoyed; the "poor whites" have not improved, and the blacks (engaged in agriculture), left to shift for themselves

and at the mercy of their own laziness and improvidence, are not so well cared for now as they were when slaves. Upon a survey of the whole country, the conclusion from the census statistics will be that agriculture is not keeping pace with the progress in welfare in other pursuits, which is apparent in spite of the concentration of wealth—a conclusion agreeing with one that had previously been made in some quarters and now fortified with details of analysis.

Home tenancy, apparently increasing in relation to population, or at any rate of such proportions that it includes about two-thirds of the families that are not the proprietors of farms, needs an explanation that can be obtained only from further statistical investigation before its import can be fully understood. It is uncertain how much weight to give to absolute poverty, to the poverty that is relative, to high land values in cities, to the migratory inducements of the present phase of civilisation, to a probably extending relationship of employer and employée, and to the apparent preference of a large body of the people for a higher standard of living in other directions than for home owning. There is a pervading and growing welfare among the people that is at least superficial. When the results of the census of 1890 are all published and co-ordinated, perhaps a more definite opinion can be formed than is now reasonable. Perhaps we may need to re-examine the general and traditional belief that home owning is an essential component of civilisation, with special reference to that phase of it through which we are now passing. Families are numerous that prefer home tenancy to ownership, under the circumstances in which they live, although able to own their homes, especially under mortgage; and were the families not possessing this ability to acquire it, many of them would still remain tenants. The problem ultimately calls for a consideration of the various features which together make up the civilisation of the day and a forecast of the future, if present drift is to continue.

MISCELLANEA.

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I.—*Indian Currency.*

IN the autumn of last year a Committee, consisting of the Lord High Chancellor (Lord Herschell), the Right Hon. Leonard H. Courtney, Sir Thomas H. Farrer, Sir Reginald E. Welby, Mr. Arthur Godley, General Strachey, and Mr. Bertram W. Currie, was appointed to examine and report on the proposals submitted by the Government of India, for stopping the free coinage of silver in India, with a view to the introduction of a gold standard. The results of their deliberations have now been published, and the following extracts are from the “Report of the “Committee appointed to inquire into the Indian Currency.”¹

Financial Difficulties of the Government of India.

There can be no doubt that the Government of India have experienced serious difficulty owing to the fall of exchange which has been going on for many years. The Government have yearly to remit a very large sum to this country in discharge of their gold obligations. In 1873-74, before the fall commenced, the amount remitted was 13,285,678*l.*, which, at a rate of exchange of 1*s.* 10*s.* 35*d.*, was represented by Rx. 14,265,700. During last year (1892-93) the amount remitted was 16,532,215*l.*, which, at the average rate of exchange in that year, viz., 1*s.* 2*s.* 985*d.*, required a payment of Rx. 26,478,415. If this could have been remitted at the exchange of 1873-74, it would have needed only Rx. 17,751,920. The whole of this difference of Rx. 8,726,495 cannot properly be regarded as a loss to the Government of India arising from the difference in exchange. It is certain, however, that India had actually to remit in 1892-93 upwards of Rx. 8,700,000 more than if the exchange had been at its former point.

At an estimated exchange of 1*s.* 4*d.* per rupee for the past year, a surplus of revenue over expenditure was shown of Rx. 146,000; the exchange having fallen to an average of rather less than 1*s.* 3*d.*, this surplus has been converted into an estimated deficit of

¹ Parliamentary Paper C-7060, 1893. Price 4½*d.*

Rx. 1,081,900, notwithstanding the improvement of the revenue by Rx. 1,653,300 over the budget estimate.

Nor is this all. The Government are compelled to contemplate a further fall, the effect of which cannot be forecast. There has been for some years past an almost continuous fall in exchange, though it was varied by a sharp rise in the year 1890. The average rate in 1889-90 was 1s. 4.566*d.* In 1890-91 the average rate was 1s. 6.089*d.* But in 1891-92 it fell to 1s. 4.733*d.*, in 1892-93 to 1s. 2.985*d.*, and exchange has been of late scarcely maintained at 1s. 2*d.* by the refusal to sell bills on India below that rate. The extent to which the financial position of the Government of India is affected by exchange is emphasised in the following passages of the recently published statement of Sir David Barbour:—

“The immediate cause of our financial difficulties, and the cause which, by comparison and for the time being, dwarfs all others, is the fall in the gold value of silver, which, as I have already shown, has added to the Indian expenditure in two years more than four crores of rupees. If that fall could be stayed and the rate of exchange with England fixed permanently at even its present low figure, the difficulty of dealing with the present deficit would be comparatively light. The revenue continues to grow in a satisfactory manner; even under the influence of indifferent seasons and poor harvests it has made fair progress. If we could feel assured that there would be no further fall in exchange, I have little doubt that increase of revenue, restriction and reduction of expenditure, with possibly some taxation of a temporary nature, would, in a very short time, re-establish equilibrium. A serious effort would no doubt be required in the first instance, but with a fixed rate of exchange we would have a definite task before us, and our measures could be regulated accordingly. But it unfortunately happens that, unless some settlement of the currency question is obtained, there is no prospect of even the most moderate degree of stability in the rate of exchange.

“Our financial position for the coming year is at the mercy of exchange, and of those who have it in their power to affect in any way the price of silver. If we budget for the present deficit of Rx. 1,595,100, and exchange rises one penny, we shall have a surplus; if it falls a penny, we shall have a deficit of more than three crores; if we impose taxation to the extent of one and a half crores of rupees, a turn of the wheel may require us to impose further taxation of not less magnitude; another turn, and we may find that no taxation at all was required. It will be obvious, from what I have just said, that what we have got to consider in making our arrangements for next year, is not so much the question of increasing the public revenue, or restricting that portion of the public expenditure which is under our control, but the chances of a settlement of the currency question.”

Value of Silver.

The production of silver has largely increased of late years, as will be seen from the following table, based as regards the earlier

years on the statistics compiled by Professor Soetbeer, and as to the more recent years on the reports of the Director of the Mint in the United States :—

	Average Annual Production of Silver.	Kilos.	Approximate Equivalent in ozs. at 32'15 to the Kilogramme.
	1876-80	2,450,252	78,776,000
	'81-85	2,812,908	90,435,000
	'86-90	3,459,201	111,213,000
	'90.....	4,144,233	133,237,000
	'91.....	4,493,100	144,453,000
	'92.....	4,731,000	152,102,000
		to	to
		4,900,000	157,535,000

In the year 1878 what is known as “the Bland Act” was passed by the Legislature of the United States, which required the Government of that country to purchase not less than 24,000,000 and not more than 48,000,000 dollars’ worth of silver per annum, which would be equal to a consumption varying from 20,625,000 to 41,250,000 ounces (641,000 to 1,283,000 kilos.) in the year. Under the authority of that Act the Government purchased yearly the minimum amount required. Notwithstanding these purchases, the price of silver fell from 52 $\frac{9}{16}$ d. per ounce, the average of 1878, to 43 $\frac{1}{16}$ d. in February, 1890.

In that year what is known as “the Sherman Act” was passed by the United States Legislature, under which the duty was imposed on the Government of purchasing no less than 54,000,000 ounces (1,680,000 kilos.) a year, in lieu of the amount required to be purchased under the Bland Act.

The effect of this obligation to purchase silver to the value of about six millions sterling beyond the purchases required under the earlier law, coupled probably with the anticipation that further legislation, and perhaps free coinage of silver, would follow, was a sudden and considerable rise in the value of silver, which culminated in the month of September, 1890, when it reached the price of 54 $\frac{5}{8}$ d. per ounce. There was, however, a speedy decline from this price, and since July, 1892, silver has realised not more than an average of 38 $\frac{1}{2}$ d. per ounce, the present price being 37 $\frac{1}{16}$ d.²

In December last, a Bill was introduced in the Senate to repeal the Sherman Act, and another to suspend purchases under it. Whether any such measure will pass into law it is impossible to foretell, but it must be regarded as possible; and although, in the light of past experience, predictions on such a subject must be made with caution, it is certainly probable that the repeal of the Sherman Act would be followed by a heavy fall in the price of silver.

Opinions differ as to the fall in price which would be effectual largely to check the production of silver. From time to time, as the price of silver has continued to fall, the opinion has been

² See also p. 515 with regard to American legislation concerning silver.

expressed that the point had been reached at which production must be checked. Experience has, however, falsified all these predictions. It is, of course, true that the fact that the working of a mine has become unprofitable does not ensure that the output shall be at once diminished or the mine closed. But, if this state of things were long to continue, and owing to a progressive fall in the price of silver, mining operations could only be carried out at an increasing loss, one would expect to find the working abandoned before any very long period had elapsed. It is, however, remarkable that a period of continually increasing fall in the price of silver has been coincident with a large increase in the production of that metal. In the quinquennium 1876-80, the annual average price of silver ranged from $54\frac{1}{16}d.$ to $51\frac{1}{4}d.$, the average for the quinquennium being $52\frac{3}{4}d.$ In the next quinquennium, 1880-85, the range was from $51\frac{1}{16}d.$ to $48\frac{5}{8}d.$, the average for the quinquennium being $50\frac{3}{8}d.$, whilst from 1886 to 1890 the price ranged from $47\frac{1}{16}d.$ to $42\frac{1}{16}d.$, the average for the quinquennium being $44\frac{5}{8}d.$ And yet the annual average production of silver at the last quinquennium was 3,459,201 kilos. (111,213,000 ozs.) as compared with 2,450,252 kilos. (78,776,000 ozs.) in the quinquennium 1876-80, being an increase of 41 per cent. And with an average price in 1891 of $45\frac{1}{16}d.$, and in 1892 of $39\frac{3}{16}d.$, or an average for the two years of $42\frac{7}{16}d.$, the production of 1891 has been estimated at 4,493,100 kilos. (144,453,000 ozs.), and that of 1892 at 4,731,000 to 4,900,000 kilos. (152,102,000 to 157,535,000 ozs.). This may show that, even at the present price, the production of silver is still profitable in a large proportion of the mines, and that in some it is sufficiently so to stimulate increased development, and that even a further fall would not necessarily diminish the total output. The phenomena may, indeed, be partly accounted for by the circumstance pointed out in the Report of the Gold and Silver Commission, that investments in the mines of precious metals are largely of a speculative character, and that many such mines may be opened out and worked for a considerable time at a loss, in the hope that such rich deposits of the ore will be found, or that altered circumstances may so change the value of the metal, that great gains will be reaped in the future.

Expansion of Revenue.

Hitherto the expansion of the revenue has largely provided for the additional calls which the fall of exchange has made on the Government of India. There has been, in spite of these additional calls, an average surplus during the last ten years of Rx. 261,550. It is true that, but for the expenditure rendered necessary by the fall in exchange, there might have been further remissions of taxation, and more might profitably have been spent upon public works. Though, upon the whole, the Government have not been compelled to impose increased taxation in order to discharge their liabilities whilst the fall in exchange has been in progress, certain alterations have been made in the taxation of the country, some in the direction of remission, others of an increase, with the net result that the amount of the increase has not greatly exceeded the

amount of the remission. But it is noteworthy that, whilst the remissions were all prior to 1882, the increased taxation has for the most part been imposed since that date. The addition to the salt tax, which was the principal source of increased revenue, produced a sum of Rx. 1,725,000.

In the past year the fall in exchange of about one penny has added Rx. 1,635,300 to the expenditure, with the result of an expected deficit of Rx. 1,081,900, instead of the anticipated surplus; and the rate in 1893-94 being estimated at 1s. 2 $\frac{3}{4}$ d. per rupee, an addition of Rx. 2,229,400 is caused to the expenditure beyond the charge for exchange entered in the budget of March, 1892. If a further heavy fall in exchange were to take place, it is impossible to expect that a financial equilibrium would be brought about by an expansion of the revenue alone.

Effect of the Proposals.

We proceed now to consider the proposal of the Government of India to close the mints, in the first instance, without adopting a gold standard, but coupled with the provision that the Indian Government should have the power of declaring English gold coins to be legal tender in India, at a rate to be fixed by proclamation, such that the value of the rupee so fixed shall not exceed 1s. 6d.

Let us consider what would be the immediate effect of these proposals. First, then, as to their effect on the gold value of uncoined silver, and on the future relation of uncoined silver to the coined rupee.

Minting of silver would, for the time, be at an end, and this use of or demand for uncoined silver would cease to exist. What has been the use or demand? and what would it be likely to be in the future? Some notion may be formed on this point by examining the quantity of rupees coined in the last few years and of silver deposited in the currency reserves against the issue of notes.

The average amount of the new coinage in India has been as follows:—

	Rx.
1870-71 to 1874-75 (annual average)	2,931,282
'75-76 " '79-80 "	8,493,881
'80-81 " '84-85 "	4,480,408
'85-86 " '89-90 "	8,310,788
'90-91 (one year)	13,163,474
'91-92 "	5,553,970
'92-93 "	12,705,210
Yearly average 1870-71 to 1892-93	6,630,628
" '75-76 " '92-93	7,658,223

The annual average of silver bullion in the paper currency reserve has been as follows:—

	Rx.
1870-71 to 1874-75 (annual average)	1,468,771
'75-76 " '79-80 "	1,319,060
'80-81 " '84-85 "	756,894
'85-86 " '89-90 "	1,019,828
'90-91 (one year)	747,974
On the 31st of March, 1892, it was	1,775,569
The average for the twenty-two years being.....	1,152,105

Looking to these figures, it will be seen that the absorption by India of silver for currency purposes since 1875 has averaged more than Rx. 7,700,000 a year. The coinage from 1885-86 to 1892-93 was Rx. 72,976,594, making an annual average of about Rx. 9,122,000. This is equivalent to 34,200,000 ounces of silver.

The net imports of silver into India have been as follows:—

	Rx.
1870-71 to 1874-75 (annual average)	3,063,082
'75-76 „ '79-80 „	7,054,200
'80-81 „ '84-85 „	6,080,527
'85-86 „ '89-90 „	9,635,134
'90-91 (one year)	14,175,136
'91-92 „	9,022,184
'92-93 „	12,863,569
Yearly average, 1870-71 to 1892-93	7,183,722
„ '75-76 „ '92-93	8,328,344

So that nearly the whole of the silver imported into India has been absorbed by currency demands, or has passed through the mints.

The United States currency demand is 54,000,000 ounces of silver a year.

The production of silver in the world is estimated for 1892 to have been from 152,102,000 to 157,535,000 ounces.

The currency demands of India, therefore, have during recent years been nearly a quarter, and those of the United States rather more than a third, of the whole world's production. If, therefore, either the one or the other were to cease, there ought, according to general laws, to be a great fall in the value of silver, and, if both were to cease, the fall ought to be very great indeed, until the reduction of the demand had produced a similar effect on the supply. We have already explained that this reduction in supply might not follow for some time the diminution of demand, and the fall might be protracted for a long time.

No safe inference, however, as to the effect of the cessation of the Indian or American demand can be founded exclusively on these figures. Apprehension of the future often operates on the minds of men, and produces an effect on the market greater than the actual circumstances of demand and supply would seem to warrant. The closing of the Indian mints would, no doubt, make it more likely that the United States would give up buying silver; and, if the apprehension of this were added to the cessation of the Indian demand, the effect might be a panic in the silver market. Eventually the price of silver would, no doubt, settle down to the new circumstances of demand and supply.

There is still another element to be considered. If the effect of the proposal of the Indian Government were, sooner or later, to cause a demand for gold in India which does not now exist, it might raise the value of gold as against all other things, including silver. In other words, the gold price of silver might be still further diminished.

All the factors of the problem are so uncertain that it is impossible to predict, with any confidence or in numerical terms, what the effect of closing the mints would be on the value of uncoined silver. The greater the effect, the greater, of course, would be the difference in value between coined and uncoined silver in India, and the greater the dangers, whatever they may be, which might arise from that source.

Next, as to the effect of simply closing the mints, on the future value or gold price of the rupee. If there be already, as there is reason to suppose, a quantity of unused rupees in India, they would have to be absorbed before the closing of the mints produced an effect on the value of the rupee. In that case, there might be some time to wait before there was any increase in its value. The apprehensions of men concerning the future might cause an immediate effect of a serious character; but we cannot venture to say for what length of time this would be maintained. Neither could we trace the progress of the enhancement of the value of the rupee, in respect of time or place, which we should expect to follow the closing of the mints.

It is impossible to estimate the extent to which the rupee might be raised, if the Indian mints and Indian currency were to remain closed against both precious metals. The Government of India, however, add the proposal to make English sovereigns legal tender at a ratio which is not to exceed 1s. 6d. to the rupee; and it remains to be considered what would be the effect of stopping the free coinage of silver, taken in conjunction with this condition. The proposal would leave it in the discretion of the Indian Government either to fix that ratio at once, or to proceed by successive stages. If the higher ratio were adopted, if the Government were not itself to add rupees to the currency, and if, in consequence of the closing of the mints, exchange rose rapidly to that ratio, the difficulties and evils arising from an appreciation of the currency, to which we shall have to call attention hereafter, would be so much the greater; if a lower ratio were adopted in the first instance, and if exchange were to rise more gradually, these difficulties and evils would be less; but, whichever plan were selected, the Indian Government would probably be deemed by the public to have decided that 1s. 6d. was to be the gold value of the rupee, which consequently would be regarded as a limit. When that limit was reached the currency would again become automatic, since gold sovereigns could be freely exported to India to serve as currency there.

Recommendations of the Committee.

It remains for us to state the conclusions at which we have arrived. While conscious of the gravity of the suggestion, we cannot, in view of the serious evils with which the Government of India may at any time be confronted if matters are left as they are, advise your Lordship to overrule the proposals for the closing of the mints and the adoption of a gold standard, which that Government, with their responsibility and deep interest in the success of the measures suggested, have submitted to you.

But we consider that the following modifications of these proposals are advisable. The closing of the mints against the free coinage of silver should be accompanied by an announcement that, though closed to the public, they will be used by Government for the coinage of rupees in exchange for gold at a ratio to be then fixed, say 1s. 4d. per rupee; and that at the Government treasuries gold will be received in satisfaction of public dues at the same ratio.

We do not feel ourselves able to indicate any special time or contingency when action should be taken. It has been seen that the difficulties to be dealt with have become continually greater; that a deficit has been already created, and an increase of that deficit is threatened; that there are at the present moment peculiar grounds for apprehension; and that the apprehended dangers may become real with little notice. It may also happen that, if action is delayed until these are realised, and if no step is taken by the Indian Government to anticipate them, the difficulty of acting with effect will be made greater by the delay. It is obvious that nothing should be done prematurely or without full deliberation; but, having in view these considerations, we think that it should be in the discretion of the Government of India, with the approval of the Secretary of State in Council, to take the requisite steps, if and when it appears to them and to him necessary to do so.

The following are the individual opinions of Mr. Leonard Courtney, of Sir Thomas Farrer and Sir Reginald Welby, and of Mr. Bertram W. Currie, which are appended to the Report:—

“It seems to me that our judgment of what the home Government should do in reference to the proposals of the Government of India must depend upon the view we take of the cause of the divergence in value that has arisen between gold and silver. The Indian Government has to make large annual payments in gold, whilst its receipts are in silver. Has gold become more valuable in itself, or silver less valuable in itself; or, if both movements have happened, which has been relatively greater? If gold has become more valuable, the burdens of India have become greater than was contemplated or intended, and we must ask ourselves whether they can be in any degree reduced. If silver has become less valuable, the taxation of India is made lighter, and we may freely examine the means, direct or indirect, of raising it. If an intermediate hypothesis is adopted, our way of viewing the problem must be modified accordingly. In our report we have not examined this preliminary question, but I hold it the first to be determined. For reasons upon which I do not now enter, I have come to the conclusion that the divergence between gold and silver has been, to a large extent, due to an appreciation of gold; and this opinion necessarily affects my judgment of the policy of the Indian Government, which is to adopt a gold standard instead of one of silver. This is to accept as unalterable, if not to intensify, the aggravated burden thrown upon India. It may be that no other course is possible, but the home Government should ask itself whether it is through its own action that no other course is possible, and whether the Indian Government might not propose a very different course if there was any chance of its being favourably considered by the supreme Government. I am myself drawn to the conclusion that the home Government is the greatest obstacle, perhaps the only substantial obstacle, to the establishment of an international agreement for the use of silver as money, which, without attempting to restore the position of twenty years since, would relieve India from the anxiety of a further depreciation of its revenue in relation to its liabilities. The problem may be thus stated: The Indian Government asks permission to adopt a certain course, but, as is well understood, not the course it

would, of its own free will, first desire to be adopted. In considering whether the course actually proposed should be sanctioned, we cannot refuse to consider whether there are invincible obstacles to the entertainment of the course which would be the first preference of India.

"If I am to put aside the previous question, and confine myself to the proposition whether the Indian Government should be allowed to suspend the free coinage of silver, so as to enhance the value of the coined rupee till it reached a certain relation to the sovereign, such as 1 to 15 (*1s. 4d.*) or 1 to 13½ (*1s. 6d.*), I concur in the report of my colleagues, subject to the following reservation:— In paragraph 139³ I think we have overrated the difficulty and delicacy of the administrative function involved in the plan there discussed. I believe action would be fairly simple if the plan were practically tackled. The mints of India are not so numerous as to prevent a daily telegraphic message of the seignorage to be charged, if such frequency should be deemed necessary. The embarrassment to which a person in London, wishing to make a remittance in India, would be exposed from his uncertainty as to what the seignorage would be when silver reached an Indian mint, would be of the same character as his present embarrassment in not knowing what the exchange would be when silver reached India, if he sent it out.

"LEONARD COURTNEY.

* In the year 1878 the Government of India made a proposal that the mints should be closed against the free coinage of silver until the rupee should rise in value to 2s., or one-tenth of an English sovereign. In making this proposal, and on other occasions, the Indian Government expressed themselves in very strong terms⁴ concerning the dangers and difficulties, present and prospective, caused to India by the fall in silver. A committee appointed by the Secretary of State, of which we were members, reported unanimously against the above-mentioned proposal, and it was rejected by the home Government.⁵ Further experience shows that, whilst the views expressed by the Government of India concerning the future of silver have been fully justified by the fall which has since taken place, the present condition of India is scarcely such as to justify their estimate of the difficulties and dangers to the country which they believed would arise from it.

"The following facts, relating to the recent progress of India, are taken from a paper read by Sir W. Hunter (one of the greatest existing authorities on the subject), at the Society of Arts, on the 16th February, 1892.

"Between 1881 and 1891 the whole number of the army had been raised from 170,000 to 220,000, and the number of British soldiers in it from 60,000 to 71,000, or, including reserves, volunteers, &c., to very much more. Many large and costly defensive works had been constructed, both on the North-West frontier and on the coasts. In recent years almost all public buildings have been reconstructed on a large scale.

"Railways, both military and commercial, have been very greatly extended. Notwithstanding these extraordinary expenses, there were, during the twenty-five years which followed 1862, fourteen years of surplus and eleven years of deficit, yielding a net surplus of Rx. 4,000,000. In 1889 the public debt of India, exclusive of capital invested in railways, showed a reduction since the mutiny period of Rx. 26,000,000. The rate at which India can borrow has been reduced from 4 or 5 per cent. to a little over 3 per cent. The revenue of India, exclusive of railways and municipal funds, has grown between 1856-57 and 1886-87 from

³ Paragraph 139 considers the suggestion that a seignorage, varying inversely with the gold value of silver, should be charged on the coinage of the rupee. The administrative difficulties were considered to be too great, and it was also feared that such a course might encourage speculation. [Ed. S.J.]

⁴ See Despatch of 9th November, 1878, para. 22, and Despatch of 4th September, 1886, para. 24.

⁵ See Treasury letter of 24th November, 1879.

Rx. 33,378,000 to Rx. 62,859,000, and in 1891 it had increased to Rx. 64,000,000, or, including railways and irrigation receipts, to Rx. 85,750,000; and this increase is due to the growth of old revenue rather than to new taxation. Further, whilst the rent or land tax paid by the people has increased by one-third, the produce of their fields has more than doubled, in consequence partly of higher prices and partly of increase in cultivation. Further, in 1891 there were nearly 18,000 miles of railway open, carrying 121,000,000 of passengers and 26,000,000 tons of goods, and adding a benefit to the people of India, calculated as far back as 1886, at Rx. 60,000,000. Further the Indian exports and imports at sea, which, in 1858, were about Rx. 40,000,000, amounted in 1891 to about Rx. 200,000,000, and the produce thus exported has increased in quality and variety no less than in amount.

"Considering facts such as these, we should even now have difficulty in recommending the closing of the Indian mints against the free coinage of silver if it were not for the circumstance that a further heavy fall in silver is possible, and in certain contingencies imminent, and that any such fall may bring with it mischiefs and difficulties much greater than any which have yet been experienced.

"Under these circumstances, having regard to the part we have already taken in this matter, as well as to the present exigencies of the case, we are anxious to state, more fully and explicitly than is done in the Report we have signed, what is the full effect of the immediate step which we have agreed in recommending, and what precautions are, in our opinion, desirable, with a view to its ulterior consequences.

"The step recommended is, that the Indian Government should be empowered to close the Indian mints against the free coinage of silver until the rupee rises in value so as to stand at a given ratio with the sovereign, such ratio to be little above the ratio which has recently been current, say, *1s. 4d.*, and that they should then be required to give rupees at that ratio for all gold brought to their mints. The immediate effect of this step will be to alter the Indian measure of value. As long as the Indian mint is open the measure of value is the market value of the weight of silver contained in the rupee, but as soon as the mint is closed we can no longer be sure that this will be the case. Further, so soon as the rupee has risen to the given ratio, the fraction of an English gold sovereign represented by *1s. 4d.* will become the measure of value. This is in itself a most important change.

"To alter the measure of value by substituting one metal for another is at all times a matter of great gravity, and to do so at a time when the relations between the two metals are in a state of constant fluctuation renders the alteration still more serious.

"At the same time, it is to be observed that the step which we recommend will produce the least possible immediate change. Its object is not so much to raise the gold value of the rupee as to prevent a further fall. It does not materially alter the present relations between debtor and creditor, but, on the contrary, prevents those relations being altered in the future by a further fall. Moreover, it provides a means whereby, in case there should be a demand for currency, that demand will be supplied automatically, and not at the discretion of the Indian Government.

"This closing of the mints is, however, only the first step in the process contemplated by the Indian Government, and that process will not be complete until gold is made full legal tender, and is received into the Indian currency as freely as gold is received in England, or as silver is now received in India. This may be effected either by the free coinage of gold at the Indian mints, or by the free reception, under arrangement with the Imperial Government, of gold sovereigns coined in England or in Australia as legal tender currency of India. When this is done the change will be complete, and India will then have a gold standard of value, and a gold automatic currency, the quantity of which will depend on the demand for it. What that demand may be is uncertain. Sir D. Barbour estimates the outside of the quantity needed to maintain the gold standard at 15,000,000*l.*,

or one-fifth in value of the estimated present rupee currency. But, whatever the precise amount, the gold currency is not expected to be more than a small fraction of the actual currency in circulation.

"This currency will in the main consist of rupees, each of which is intended to circulate, not at the value of the silver contained in it, but at the value of the gold contained in the fraction of the sovereign (1s. 4d.) which it represents. With the exception of the small quantity of gold in actual circulation, the currency of India will thus become a token currency of unparalleled magnitude; and, if the market value of silver should fall considerably, its value would become very much greater than the value of the silver contained in it. Under such circumstances, it will, to a great extent, resemble a paper currency, and, if it were not made exchangeable for gold on demand, would resemble in many respects an inconvertible paper currency. The question then arises whether it is certain that such a currency will be maintained at its gold value without further precautions.

"It is no doubt true that, until the rupee has risen in value to this adopted ratio, the scheme will not have come into full operation, and that, when it has come into full operation, the restriction placed upon the issue of silver rupees will tend to keep the rupee currency at the fixed gold value. But it may well be questioned whether this restriction is in itself a sufficient guarantee that this gigantic token currency will, under all circumstances, be kept at par value. Sir David Barbour himself holds that eventually, if the scheme is to be successful, gold when required must be given for the rupee, either without a premium or at a small premium.

"It is of course obvious that a great country like India, if she undertakes a token currency, is under an obligation to maintain its value, and that she ought to discharge that obligation by making it reasonably certain that, where gold is needed in exchange for rupees, it will be possible to obtain it at the fixed ratio.

"It has been argued that this object might possibly be effected without requiring the Government of India to give gold for silver at that ratio, and without the public confidence in their ability to do this, which would arise from their accumulating and possessing a stock of gold available for the purpose. Instances may, no doubt, be selected in which governments have maintained their inconvertible token currency at, or nearly at, par without these precautions. But a silver token currency, though not in form a promise to pay, really implies, as we have already said, an obligation to maintain its par value; and prudence as well as experience suggest that this obligation should be supported by the obvious means of fulfilling it.

"The obligation on the Government to coin silver rupees when the rupee is at 1s. 4d. does not, in itself, carry with it a corresponding obligation on the Government to give gold for rupees, and is, therefore, if we are right in what we have stated above, imperfect without some expression of that obligation. But that obligation will not arise until the rupee reaches the exchange value of 1s. 4d., and it may therefore not be necessary to provide a reserve of gold before this exchange is reached. This exchange, indeed, may not be reached at all, and in that case no gold reserve will be needed. But if the measure operates as we expect gold will probably flow in, and will replace silver as the reserve against the Government paper issue. If gold thus flows in automatically, the Indian Government will be thereby enabled to accumulate a moderate reserve; but, even if it does not, a reserve should, we contend, be provided before the Indian Government takes the final step of announcing gold as the standard, coupled with the correlative obligation to give gold for silver.

"What amount of gold reserve may be necessary it is difficult to say, but, in order to have the desired effect, it must be substantial. Nor, considering that it will in all probability be generally resorted to for purposes of export, is it necessary to decide in what form or in what place it should be kept. The circumstances of India are favourable for the accumulation of the necessary stock. India imports more of the precious metals than she exports; her inhabitants, no doubt, possess already a stock of uncoined gold, and, if the Indian Government

receive gold in payment of debts due to them, gold ought to come to their treasuries.

"At any rate, the expense necessary to procure and retain the requisite amount is one that cannot be avoided by any government which desires to maintain the credit of its currency, and will be insignificant compared to the loss of which the Indian Government now complain.

"Under these circumstances we could not join in the recommendation contained in the Report without at the same time recommending that the Government of India should, in view of the ultimate adoption of the whole of their plan, be prepared to secure the convertibility of their token silver currency, and should with that object accumulate a sufficient reserve of gold.

"We think it right to add that the questions, whether gold has become more valuable in itself, or silver less valuable in itself, or whether both movements have taken place, and to what extent each movement has gone, as well as the further question between bimetallism on the one hand and a universal gold standard on the other, are questions of which we have taken no notice, as we do not think that they fall within the scope of the reference to us.

"T. H. FARRER.

"R. E. WELBY."

"While cordially concurring with the views of my colleagues, so far as they support the proposals of the Government of India, I should have preferred to approve those proposals without imposing the condition that the closing of the mints should be accompanied by an announcement that rupees will be coined in exchange for gold at the ratio of 1s. 4d.

"It will be admitted that in a matter of this kind the minimum of State interference is desirable.

"The only excuse for any action on the part of Government is that the evils from which they are suffering are becoming intolerable, and that, apart from the closing of the mints, no practical remedy has been proposed or is attainable.

"In my opinion, the proper course for Government to adopt is to issue a proclamation to the effect that—

"Having regard (1) to the redundancy of silver money in India, as evidenced by the accumulation of rupees and paper currency in the banks, and (2) considering the uncertain policy of other nations with respect to silver, the Governor-General in Council has resolved to suspend for the present the coinage of silver.

"One effect of such a measure must necessarily be that the London exchange banks, in tendering for Council bills, will be compelled to quote the price in sterling which they are willing to pay. Another probable effect will be that gold will be sent to India in increased quantity on private account in order to be exchanged into rupees; and it appears to me that the price in each of these cases, when extended over a considerable period of time, and after a certain degree of stability has been attained, will afford the best guide to Government in estimating the gold value of the rupee, whenever they are called upon to open their mints to the coinage of gold.

"The Government of Austria-Hungary closed their mints to the free coinage of silver in 1879, but did not declare a ratio between gold and silver till 1892. It seems likely that an interval of time more or less prolonged may elapse before the Government of India will be in a position to declare a ratio, having regard to the great uncertainty of the effect which its action may produce upon the rate of exchange.

"I prefer to leave full discretion to that Government to take such measures as occasion may require and experience may dictate, subject to the consent of the Secretary of State in Council.

"I fear that any arbitrary action on the part of Government in a matter respecting which it is impossible that all the facts can be present to their consideration, might lead to reclamations both from the public creditor and from others whose interests depend upon Indian exchange, and I am unwilling to take

the responsibility of attempting to fix a rate if the object can be practically accomplished by the natural action of the market.

“Moreover, I fail to see what advantage would be gained by selecting the ratio of 22·37 to 1 (1s. 4d. the rupee), rather than that of 18·22 to 1, which has been adopted with apparent success in Austria, or that which is in use among other nations.

“If, contrary to expectation, exchange should rise suddenly in an inconvenient degree, I would meet the difficulty in the way proposed by the Government of India, by declaring that English gold coins shall be legal tender in India at a rate to be fixed by them.

“B. W. CURRIE.”

II.—*Currency Systems of different Nations.*

THE following summary of the various systems in use among different nations is included in the Report of the Indian Currency Committee (C-7060), the principal results of which are given in the preceding article, and forms a useful appendix to that article, as helping to throw some light on the causes of the financial troubles in India.

I.—*United Kingdom.*

The present Indian monetary system is substantially modelled on that of the United Kingdom, the essential features of which are—

1. The standard coin to be of one metal, gold.
2. The mint to be open to the free coinage of this metal, so that the quantity of current coin shall be regulated automatically, and not be dependent on the action of the Government.
3. Token coinage to be of a different metal, or metals, subsidiary to the standard coin, legal tender only to a limited amount, and its face value and the price in the standard metal at which it can be obtained from the mint being greater than the market value of the metal contained in it.

It may be added that, under the Act of 1844, paper money is convertible on demand into gold, its quantity above a fixed amount varying with the quantity of gold against which it is issued.

Lord Liverpool and other authorities would have added that the standard metal, gold, should be the principal medium of exchange, but this is no longer the fact. Gold is the standard or measure, but for the most part not the medium itself. Though, however, in wholesale transactions, and in a great many retail purchases, gold is no longer the medium of exchange, the use of gold coins is probably greater in the United Kingdom than in most other countries.

As regards the stocks of gold and silver (other than mere token money) in the United Kingdom and in India, such information as we have been able to obtain leads to the conclusions contained in the two following paragraphs.

In the United Kingdom the amount of gold and silver available for the purposes of currency is uncertain, but the mint estimate of the gold in circulation is 91,000,000*l.*, of which the amount in banks (including that in the Issue Department of the Bank of England and in other banks against which notes are issued) is stated to be 25,000,000*l.*

There is also the fiduciary issue of notes by the Bank of England and other banks, which at the close of 1892 stood at 27,450,000*l.*

It must, however, be remembered that the gold held by the Issue Department of the Bank of England, and the gold held by the Scotch and Irish Banks in respect of notes issued beyond the authorised limits, cannot be looked upon as an integral portion of the currency, since it cannot be used at the same time with the notes which are issued against it; but the amount is included in the sum of 91,000,000*l.* above mentioned, in order to facilitate comparison with foreign countries which keep a gold reserve against their notes, though not under conditions so strict and specific as those of the English Act of 1844.

India.

In the Indian currency system, as established in 1835, silver takes the place which gold occupies in the English system. Cheques, bankers' money, and other credit, have not, in India, replaced the metallic currency to the same extent as has been the case in England.

The Indian mint is open to the free coinage of silver; the rupee and the half-rupee are the only standard coins, and are legal tender to an unlimited amount. It is uncertain what is the stock of rupees in India, but it must be very large; Sir David Barbour says that the amount in active circulation, in which of course the hoards are not included, has been recently estimated at Rx. 115,000,000; and by some writers it has been placed much higher. Mr. F. C. Harrison, who has taken great pains in the investigation, puts it at Rx. 134,170,000, besides Rx. 30,000,000 of the coins of native States.

Gold is not legal tender, and there are no current gold coins.

There is a subsidiary silver fractional coinage, which is legal tender only to the limit of one rupee.

Paper money may be issued to the amount of 8,00,00,000 rupees against securities; and beyond this only against a reserve of coin or bullion deposited. The amount of notes so issued was Rs. 26,40,18,200 on the 31st of March, 1893, and the reserve was constituted as follows:—

	Rs.
Coin	17,53,85,744
Bullion	86,82,456
Securities	8,00,00,000

For the purposes of the paper currency India is divided into circles, at present eight in number. The notes are legal tender for five rupees and upwards within the circle for which they are

issued, and are convertible at the office of issue, and (except in the case of British Burmah) at the principal city of the Presidency to which the circle of issue belongs.

When we proceed to examine the currencies of other countries, we find that many of the conditions which have been considered essential in English and Indian currencies are either wanting altogether or have been replaced by other conditions. The following is a short statement of the most important features in these currencies, and of the stock of gold, silver, and notes available for currency, so far as we have been able to obtain them as they stood at the close of 1892; but we must guard ourselves against being supposed implicitly to accept all the figures.

United States.

The standard is gold, and the mint is open to gold.

There is little gold coin in circulation, at any rate in the Eastern States, but a large reserve of gold in the banks and in the Treasury.

	£
Stock in the banks.....	82,250,440
„ Treasury	48,852,290
Silver dollars in the Treasury	70,948,080
„ circulation	12,334,490

and these, or the certificates issued against them, circulate at a gold value at the old ratio of 16 to 1.

There was also in the Treasury, of silver bullion, an amount valued at 17,874,430*l.*, against which paper certificates are issued, which circulate at a gold value at the same ratio.

The aggregate paper currency was about 210,000,000*l.*

The silver currency and paper based on silver are accepted as legal tender to any amount, and there is no premium on the gold and gold certificates in comparison with them.

In this case, a very large amount of silver or certificates representing such silver, has hitherto been kept in circulation at the ratio of 16 to 1. But there is considerable apprehension concerning the difficulties which may arise if the compulsory purchase of silver by the Treasury for currency purposes should continue. Under the Bland Act, passed in 1878, these purchases amounted, as above stated, to about 20,600,000 ounces in the year, whilst under the Sherman Act, which was passed in 1890, these purchases have been increased to an annual amount of 54,000,000 ounces.

Canada.

The standard is gold; but, though there is a provision for coining gold dollars at the rate of $4\frac{86}{100}$ to the British sovereign, that is at the ratio of 16 to 1, there is no Canadian gold coin, and little or no gold in circulation.

Canada has no mint. Fractional silver currency is supplied from England.

The stock of gold is said to be about 2,400,000*l.*

There are about 3,700,000*l.* worth of Dominion notes of various amounts, from 25 cents up to 4 dollars; and the banks may issue notes for 5 dollars or any multiple thereof, to an amount not exceeding their "unimpaired paid up capital," such notes being redeemable in specie or Dominion notes; the present issue is about 7,000,000*l.*

The Dominion notes (unless it be for small amounts) are redeemable in "coin current by law in Canada," that is, in such dollars as above mentioned. The American silver dollar circulates at par, at the ratio of 16 to 1, although a Government proclamation was issued in 1870 declaring it to be legal tender up to the amount of 10 dollars, but only at 80 cents per dollar.

Silver is not convertible into gold.

This is a very remarkable case, since, without any gold currency, and without even a mint for gold, dollar notes and silver dollars circulate at the United States gold dollar value.

West Indies.

All the West India Islands and British Guiana have adopted the English currency, gold being the standard, but silver being a legal tender without limit. In practice, British gold is never seen there, but the circulating medium consists of shillings and Colonial bank notes. Except in British Honduras, no silver dollars are legal tender, but gold doubloons remain legal tender at 64*s.* (the rate fixed in 1838) throughout the West Indies.

In Jamaica and Trinidad, gold doubloons and United States gold coins are not uncommonly seen; they come from the Isthmus and Venezuela, and go to New Orleans and New York in a steady current.

In the Bahamas the United States gold dollar (worth 4*s.* 1*3* 16*d.*) is popularly over-rated at 4*s.* 2*d.*, and consequently American eagles circulate freely (or did so until notes were introduced).

British Honduras has as its standard the silver dollar of Guatemala, which is a 5-franc piece without any gold behind it.

This is an instance of a gold standard without gold, and a silver token currency circulating to an unlimited extent at a value based on that gold standard.

Germany.

Germany in adopting a gold standard in 1873, adopted most of the features of the English currency system. The mint was opened to gold, and a subsidiary silver token coinage was introduced, limited in quantity by reference to population, and legal tender only to a limited amount. The peculiarity of the case of Germany is that 20,000,000*l.* worth of old silver thalers are retained in circulation at a ratio of 15½ to 1, and are legal tender to an unlimited extent. Of the new coinage of gold, the banks hold 34,250,000*l.*, in addition to 6,000,000*l.* stored at the fortress of Spandau, while the amount in circulation is estimated to be from 65,000,000*l.* to 70,000,000*l.*

The amount of paper currency issued is 6,000,000*l.* by the Imperial Government, 53,790,000*l.* by the Reichsbank, and 8,950,000*l.* by other banks, making a total of 68,740,000*l.*

On the whole, the German system approximates more closely than any other to our own, though it is said that there are not equal facilities for obtaining gold for export.

Scandinavia.

The standard has been gold since 1873, and the mints appear to be open to gold, but there is little gold in circulation. Bank notes convertible into gold are the ordinary currency.

Silver is only subsidiary token currency. The stock of gold held by the banks appears to be about 5,500,000*l.*, and of notes about 13,000,000*l.*

The Latin Union: (a) France.

The mints are open to gold.

Silver coinage, except of subsidiary coins, has since 1878 been, and is now, prohibited under the rules of the Latin Union.

There is a large quantity of gold coin in actual circulation.

The peculiarity of the French currency is the large amount of 5-franc pieces which circulate at the old ratio of $15\frac{1}{2}$ to 1. They are legal tender to any amount, and are accepted as freely as the gold coin. They are not legally convertible into gold.

The stock of currency appears to be as follows:—

	£
Gold, about	171,000,000
Silver	140,000,000
Notes	132,000,000

The notes of the Bank of France are convertible into gold or silver, at the option of the bank. The bank pays gold freely for home use, but, if gold is required in large quantities, especially for exportation, special arrangements must be made.

There is no difficulty in maintaining either the silver or the notes at their gold value.

Here is a currency which for all practical purposes appears to be perfectly sound and satisfactory, but which differs from our own in most important particulars. It is sometimes called “*étalon boiteux*” or limping standard; but, inasmuch as the mint is open to gold, and closed to silver, the standard is really gold, whilst a very large proportion of the currency is either inconvertible silver, or notes payable (at the option of the bank) in silver or gold, maintained without difficulty at the above-mentioned artificial ratio.

(b) Belgium.

The mint is open to gold.

The rules as to 5-franc pieces, as to the ratio between gold and silver, and as to legal tender, are the same as in France.

The stock of currency appears to be as follows:—

	£
Gold, about	5,000,000 or more.
Silver, 5-fr.	8,000,000
Notes	15,000,000

The notes appear to be convertible into either gold or silver, at the option of the bank.

The situation is the same as in France; but inconvenience might be experienced if the Latin Union were to be terminated, and the several members were obliged, under the conditions imposed by that union, to liquidate in gold their silver currency held by France.

(c) *Italy.*

The mint is open to gold.

The rules as to 5-franc pieces, as to the ratio between gold and silver, and as to legal tender, are the same as in France.

The stock of currency appears to be:—

	£
Gold	23,600,000
Silver, 5-franc pieces	4,000,000
Notes	57,000,000

There is very little metallic coin in actual circulation; the paper is at a discount, and the exchange below par.

The state of this currency is unsatisfactory, not, however, on account of the artificial ratio between gold and silver, but on account of the want of both metals, owing probably to the state of the finances and credit of the country. The same difficulty would arise as in Belgium, if the Latin Union were terminated.

Holland and the Dutch East Indies.

From 1847 to 1873, Holland and its dependencies had the single silver standard. In consequence of the changes in Germany and other countries in the north of Europe, which adopted the gold standard in 1873, Holland suspended the coinage of silver in that year. Silver could no longer be brought to the Dutch mint, and gold coin could not be issued, because the Dutch Parliament had not agreed on a gold coin or a gold standard. There was a certain quantity of silver coins in circulation, and their value at this period was regulated neither by the market value of gold nor by that of silver. The demand for coin was increasing in the years 1873 to 1875; and the result was that, whilst the value of silver, as a metal, was going down in the market, Dutch silver coins were appreciated as against gold. The rate of exchange on London, which oscillates now on the gold basis between 12·1 and 12·3 florins to the £ sterling, shrank to 11·12 florins.

In 1875 the gold standard was adopted, at a ratio of 15½ to 1, and the Dutch mint was opened to gold; whilst the coinage of silver, except of subsidiary token coins, was prohibited, and remains so at the present time. A considerable quantity of gold

coin was minted, which was, however, kept in reserve, and not used for internal circulation. Silver florins, at the gold value, were legal tender to any amount; and, with paper florin notes, which were also at a gold value, formed the internal circulation of the country. Neither silver nor paper is convertible into gold; but the Netherlands Bank has always been willing to give gold for exportation. In 1881 and 1882 the balance of trade turned against Holland, and the stock of gold ran down to about 600,000*l.* Under these circumstances, an Act was passed in April, 1884, which enabled the Government to authorise the bank to sell, at market prices, a quantity of 25,000,000 silver florins, whenever the state of the currency might demand it. This Act has never been brought into operation, but it has restored confidence; the necessary stock of gold, amounting now to upwards of 5,000,000*l.*, has been maintained; the bank gives gold freely for export; and the exchange has continued steady at from 12.1 to 12.3 florins to the £ sterling. No difficulty has been experienced, either in Holland or in her Eastern dependencies. The system of currency has always been, and still is, the same in both. There is no mint and little or no stock of gold in Java; and at the same time the rate of exchange between Java and Europe is always at or about par. It should be added that Java merchants can always do their business with gold countries through Holland.

The stock of currency is as follows:—

	In Holland.	In Java.
	£	£
Gold	5,200,000	500,000
Silver	11,000,000	2,773,000
Paper	16,000,000	4,250,000

This is a case in which the standard is gold, with little or no gold in circulation. The silver is kept at an artificial ratio much higher than its market value, although neither it nor the paper is convertible into gold except for purposes of export. This artificial exchange is maintained in the Dutch East Indies, where there is little or no gold, as well as in Holland, where there is a limited stock.

Austria-Hungary.

Before 1879 the standard coin was the florin, which was equal to $\frac{1}{4.5}$ th part of a pound of fine silver. The mint was open to silver, and silver florins and silver florin notes were legal tender to an unlimited amount. The actual circulation consisted of florin notes, which were inconvertible; their amount was 52,500,000*l.* in 1879, and 69,500,000*l.* at the beginning of 1892. The average exchange on London for 10*l.* sterling was 141.78 in 1861,⁶ after the

⁶ Table given by M. Soetbeer (see Appendix to Gold and Silver Commission's

Italian war. It became 109 in 1865, but rose to 125·98 in 1867, after the Austro-Prussian war. It fell to 110·53 in 1872, continued at 111 till 1875, but rose to 122·25 in 1877, 117·89 in 1878, and 116·63 in 1879. It seems that in the earlier years there had been a premium on silver, the paper money being depreciated below its face value, so that no silver was brought to be coined. But silver fell in price from 59½*d.* per ounce in 1873 to 51½*d.* per ounce in 1879, the notes ceased to be depreciated, and, as the Austrian mint was open to silver, it became worth while to bring silver to the mint to be coined; so that between August, 1878, and November, 1879, the silver circulation had increased by 7,000,000*l.* Under these circumstances the Austro-Hungarian Government, in March, 1879, stopped the coinage of silver on private account, but continued coining it at their own discretion. The quantity so coined between 1880 and 1891 appears to have amounted to 125½ millions of florins. This state of things continued till 1891, when the Austro-Hungarian Government determined to propose the adoption of a gold standard, and to open the mint to gold, for which the necessary measures were passed by the Austrian and Hungarian Legislatures in August, 1892. From 1879, when the mints were closed against the private coinage of silver, the average exchange for 10*l.* sterling rose from 117·83 florins in 1880 and 1881 to 126·61 florins in 1887, and then fell to 116·80 in 1891, and 119·29 in 1892. The whole oscillation between 1879, when the mints were closed, down to 1891, when the resolution to adopt a gold standard was taken, was less than 9 per cent., and at the end of the period it stood at nearly the same figure as at the beginning, though in the meantime the price of silver had fallen by nearly 12 per cent., and in 1891 it was more than 6*d.* per ounce lower than in 1879. The basis for conversion to a gold standard, which appears to have been founded on an average of this exchange, is a ratio of 18·22 silver to 1 gold, or 1 gold florin = 2 frs. 10 c., making 120·1 florins equal to 10*l.* The mint is now open to gold.

Report, p. 209), which differs slightly from the figures of exchange on London given in the following table, furnished by the Anglo-Austrian Bank :—

Year.	Annual Average of Exchange on London in Vienna.	Average Price of Bar Silver per oz. in London. (Pixley and Abell.)	Year.	Annual Average of Exchange on London in Vienna.	Average Price of Bar Silver per oz. in London. (Pixley and Abell.)
		<i>d.</i>			<i>d.</i>
1873	110·89	59½	1883	120·00	50 ⁹ / ₁₆
'74	110·91	58 ⁵ / ₁₆	'84	121·89	50 ³ / ₈
'75	111·78	56 ⁷ / ₈	'85	124·92	48 ⁵ / ₈
'76	121·32	52 ³ / ₄	'86	126·01	45 ³ / ₈
'77	122·17	54 ¹³ / ₁₆	'87	126·61	44 ⁵ / ₈
'78	118·99	52 ⁹ / ₁₆	'88	124·22	42 ⁷ / ₈
'79	117·30	51½	'89	119·55	42 ¹³ / ₁₆
'80	117·83	52½	'90	116·05	47 ¹¹ / ₁₆
'81	117·83	51 ¹¹ / ₁₆	'91	116·80	45 ¹¹ / ₁₆
'82	119·60	51 ⁵ / ₈	'92	119·29	39 ¹³ / ₁₆

The Austrian Government have now at their command a reserve of about 351,000,000 florins (or nearly 30,000,000*l.*) in gold, and it appears to be intended that a certain quantity of paper and of silver florins shall be withdrawn from circulation, and that the paper florins remaining in circulation shall be convertible into gold.

This is a very remarkable case. The fall in exchange, which would have accompanied or followed the fall in the market value of silver, has been averted by closing the mints against free coinage of silver. Fair steadiness of exchange has been maintained for more than a decade, although the paper currency was inconvertible, and silver was coined on Government account alone; and, in the end, a law has been passed for the adoption of a gold standard, a gold reserve has been accumulated, and the mint has been opened to gold.

A fractional subsidiary coinage of silver is provided for, but the currency will probably consist, in the main, of paper notes convertible into gold.

Brazil.

The case of Brazil is perhaps the most remarkable of all, as showing that a paper currency without a metallic basis may, if the credit of the country is good, be maintained at a high and fairly steady exchange, although it is absolutely inconvertible, and has been increased by the act of the Government out of all proportion to the growth of the population and of its foreign trade. The case, it need hardly be said, is not quoted as a precedent which it is desirable to follow.

The Brazilian standard coin is the milreis, the par gold value of which is 27*d.* A certain number were coined, but have long since left the country, and the currency is and has since 1864 been inconvertible paper. The inconvertible paper was more than doubled between 1865 and 1888, but the exchange was about the same at the two periods, and very little below the par of 27*d.* It had gone down to 14*d.* in 1868, the date of the war with Paraguay, but had risen again, and was in 1875 as high as 28 $\frac{3}{8}$ *d.* In 1869 when the quantity of paper money was increased from 12,468,000*l.* to 18,322,000*l.*, the mean rates of exchange showed an advance of about 11 $\frac{3}{4}$ per cent. Since the revolution which displaced the Empire and established the Republic, the paper issues of the banks were increased by more than 30,000,000*l.* in less than three years, so that the paper issue in 1892 amounted to 51,372,700*l.*, and, as the result of this, and of diminished credit, the exchange in that year ranged from 10 $\frac{1}{4}$ *d.* to 15 $\frac{3}{4}$ *d.*

Results of Examinations of Different Systems of Currency.

It is impossible thus to review foreign systems of currency without feeling that, however admirable may be the precautions of our own currency system, other nations have adopted different systems, which appear to have worked without difficulty, and have enabled them to maintain for their respective currencies a gold standard and

a substantial parity of exchange with the gold-using countries of the world, which has, unfortunately, not been the case with India. This has been effected under all the following conditions, viz.:—

- (a.) With little or no gold coin, as in Scandinavia, Holland, and Canada.
- (b.) Without a mint or gold coinage, as in Canada and the Dutch East Indies.
- (c.) With a circulation consisting partly of gold, partly of overvalued and inconvertible silver which is legal tender to an unlimited amount, as in France and other countries of the Latin union, in the United States, and also in Germany, though there the proportion of overvalued silver is more limited, the mints in all these countries being freely open to gold but not to silver, and in some of them the silver coinage having ceased.
- (d.) With a system under which the banks part with gold freely for export, as in Holland, or refuse it for export, as in France.
- (e.) With mints closed against private coinage of both silver and gold, and with a currency of inconvertible paper, as has been temporarily the case in Austria.
- (f.) With a circulation based on gold, but consisting of token silver, which, however, is legal tender to an unlimited extent, as in the West Indies.

The case of Holland and Java is very remarkable, since in that case the gold standard has been maintained without difficulty in both countries, although there is no mint in the Dutch East Indies, no stock of gold there, and a moderate stock of gold in Holland; whilst the currency consists of silver and paper legally and practically inconvertible into gold, except for purposes of export. The case of Canada, which maintains a gold standard without a gold coinage, is also very remarkable.

The case of Austria-Hungary is also interesting, and presents a remarkable contrast to that of India, as will be seen from the following table:—

Years.	Average Value of Florin, deduced from the Table of Exchange on London in Vienna, given on p. 501 (<i>note</i>).	Average Value of Rupee in London, for Bills on India (for Official Years 1873-74, &c.).	Comparison of the Two Tables, taking the First Year as equal to 100.	
			Austrian florin.	Indian rupee.
1873 ...	<i>d.</i> 21'64	<i>d.</i> 22'35	100'00	100'00
'74	21'64	22'16	100'00	99'13
'75	21'47	21'63	99'21	96'76
'76 ...	19'78	20'51	91'40	91'75
'77 ...	19'64	20'79	90'76	93'02
'78	20'17	19'79	93'21	88'56
'79	20'46	19'96	94'55	89'31
'80 ...	20'37	19'96	94'13	89'28
'81	20'37	19'89	94'13	89'01
'82 ...	20'07	19'52	92'74	87'36
'83	20'00	19'54	92'42	87'41
'84 ...	19'69	19'31	90'99	86'39
'85 ...	19'21	18'25	88'77	81'67
'86 ...	19'05	17'44	88'03	78'03
'87	18'96	16'90	87'62	75'60
'88 ...	19'32	16'38	89'28	73'28
'89 ...	20'08	16'57	92'79	74'12
'90 ...	20'68	18'09	95'56	80'93
'91	20'55	16'73	94'96	74'86
'92	20'12	14'98	92'98	67'04

It will be seen that a country with a silver standard, and a currency consisting partly of over-valued silver, but chiefly of inconvertible paper, has been able, by closing its mints against private coinage for a series of years, and whilst still continuing to coin silver on Government account, to maintain a fairly steady rate of exchange with gold-using countries for a considerable period, preparatory to adopting a gold standard.

Concerning the currency of Russia we have less information than in the case of other countries. But it appears that there is little or no silver or gold coin in the country, and that the currency consists of inconvertible paper roubles, based on silver. The Russian mint is now closed against the coinage of silver on private account. It is an interesting fact that the paper rouble, being in form a promise to pay silver, is now, owing to the fall in silver, exchanged for a higher value in gold than the silver which it promises to pay. Taking silver at 38*d.* per ounce, the silver rouble would be worth 23'774 pence, whilst the paper rouble is quoted at 25 pence. We have already called attention to a similar experience in the case of Austria-Hungary. The phenomenon can, of

course, only arise when the amount of the paper currency is limited.

It would thus appear that it has been found possible to introduce a gold standard without a gold circulation; without a large stock of gold currency; and even without legal convertibility of an existing silver currency into gold. Before concluding, however, that these precedents are directly applicable to the condition of things existing in India, it is necessary to examine them carefully. There is no one of the countries above referred to in which silver has been so largely and so exclusively used as in India during the last half century; and in most of them the people have been for long accustomed to deal with their silver coins on the basis of a double standard. To the Frenchman the 5-franc pieces, to the American the dollars, have for generations been not only so much silver, but the equivalent of a certain quantity of gold; and it would have been a shock to his habits and mode of thinking to treat them otherwise. It may be easier to maintain an old and well-known silver currency at a gold value in countries which have been bimetallic, and in which large quantities of gold and silver are already in circulation, than to introduce such a system into a mono-metallic silver country such as India. The case of Austria-Hungary again differs from that of India in some important particulars. In Austria-Hungary the standard was silver with an inconvertible paper currency; and the state of this paper currency was probably one of the chief factors which made a fundamental change necessary. In making the change the relation of Austria-Hungary to the neighbouring countries was, no doubt, an important consideration, and the fact that Germany and other States had adopted a gold standard rendered it expedient to take a similar course.

Even in the case of Holland and its East Indian colonies, which is *primâ facie* very much in point, there are differences which detract from its value as a precedent for India. At the time the change of standard was adopted, the relative values of silver and gold had not parted as they have since done; and, as regards Java, it must be borne in mind that, although it is an eastern country dealing largely with silver using countries, it has always had the same standard and the same currency as Holland, the change being made in the standard of both at the same time.

On the whole, it seems to us that, whilst the differences we have pointed out prevent the cases of the countries referred to from being applicable in all respects as precedents to the case of India, and the circumstances of each particular country must be studied, yet the experience derived from the currencies of those countries is not without value as bearing on the questions which we have to consider, and is important as showing under what various conditions the exchange value of a currency may be maintained.

III.—*Finances of the United States.*⁷

THE ordinary revenues of the United States during the twelve months ending 30th June, 1892, from all sources amounted to 425,868,260 dollars 22 c. (85,173,652*l.*), and the expenditures for the same period were 415,953,806 dollars 56 c. (83,190,761*l.*), leaving a surplus of 9,914,453 dollars 66 c. (1,982,890*l.*).

This surplus, together with 30,656,014 dollars taken from the Treasury, was applied to the payment of the Public Debt.

The different items in 1891 and 1892 of revenue were as follows:—

Source.	1891.		1892.		Increase.		Decrease.	
	\$	c.	\$	c.	\$	c.	\$	c.
Internal revenue	145,686,249	44	153,971,072	57	8,284,823	13	—	—
Postal service.....	65,931,785	72	70,930,475	98	4,998,690	26	—	—
Proceeds, District of Columbia } ten-year funding bonds }	—	—	2,412,744	—	2,412,744	—	—	—
Sale of land, Brooklyn navy yard	—	—	593,860	33	593,860	33	—	—
Sales of Indian lands	602,545	38	847,813	23	245,267	85	—	—
Smithsonian fund	—	—	200,000	—	200,000	—	—	—
Interest repaid by Pacific rail- } roads	823,904	4	962,437	67	138,533	63	—	—
Registers' and receivers' fees	931,906	58	1,066,403	51	134,496	93	—	—
Revenues of District of Columbia	2,853,897	74	2,967,044	71	113,146	97	—	—
Customs fines, penalties, &c.....	134,023	27	227,030	71	93,007	44	—	—
Sale of custom house, Milwaukee	—	—	64,000	—	64,000	—	—	—
Immigrant fund	292,271	—	330,128	65	37,857	65	—	—
Tax on national banks	1,236,042	60	1,261,338	11	25,295	51	—	—
Deposits for surveying public } lands	131,422	80	149,966	21	18,543	41	—	—
Miscellaneous items	1,881,712	18	1,962,838	93	81,126	75	—	—
Customs	219,522,205	23	177,452,964	15	—	—	42,069,241	8
Profits on coinage	7,701,991	82	2,020,512	39	—	—	5,681,479	43
Sale of public lands	4,029,535	41	3,261,875	58	—	—	767,659	83
Nashville and Chattanooga } Railway Company..... }	500,000	—	—	—	—	—	500,000	—
Sinking fund, Pacific railroads ..	2,326,359	37	1,828,771	46	—	—	497,587	91
Tax on sealskins	269,673	88	46,749	23	—	—	222,924	65
Soldiers' Home permanent fund	308,648	34	194,385	45	—	—	114,262	89
Customs emolument fees	277,040	79	191,591	45	—	—	85,449	34
Custom house fees.....	555,057	76	490,627	50	—	—	64,430	26
Sale of condemned naval vessels	78,037	36	31,854	12	—	—	46,183	24
Sales of Government property....	259,379	5	236,498	38	—	—	22,880	67
„ ordinance material	122,668	1	101,242	35	—	—	21,425	66
Fees on letters patent	1,305,255	81	1,286,609	2	—	—	18,646	79
Consular fees	782,619	45	777,424	53	—	—	5,194	92
Total	458,544,233	3	425,868,260	22	17,441,393	86	50,117,366	67
Net decrease	32,675,972	81	—	—	—	—	—	—

⁷ Extracted from the *Report for the Year 1891-92 on the Finances of the United States*. [Foreign Office, Annual Series, No. 1285, 1893.]

The expenditures during the same periods were:—

Source.	1891.	1892.	Increase.	Decrease.
<i>Civil Establishment.</i>	\$	\$	\$	\$
Legislative—Salaries and Expenses	8,156,598	7,683,514	—	473,084
Executive proper "	174,897	177,615	2,718	—
Department of State "	141,332	135,505	—	5,827
Foreign intercourse.....	2,028,715	1,742,400	—	286,315
Treasury Department—				
Salaries and Expenses.....	3,158,833	3,210,409	51,576	—
Mint and Assay Offices	1,392,353	1,191,590	—	200,763
Salaries, &c., Internal Revenue.....	4,003,476	3,906,645	—	96,831
Refund of Direct Tax.....	11,521,497	2,610,855	—	8,910,642
Bounty on Sugar.....	—	7,342,078	7,342,078	—
Collecting Customs Revenue	6,964,249	6,646,276	—	317,973
Refunding excess of Deposit	6,989,846	3,007,219	—	3,982,627
Debentures on Drawbacks	4,925,440	3,689,000	—	1,236,440
Lighthouse Establishment.....	3,007,883	3,237,317	229,434	—
Public Buildings	4,811,822	6,319,277	1,507,455	—
Engraving and Printing.....	1,081,053	1,123,034	41,981	—
Sinking Fund, Pacific Railways	2,318,290	1,833,423	—	484,867
Miscellaneous*.....	9,938,062	9,435,037	—	503,025
War Department—Salaries and Expenses	2,646,362	2,414,949	—	231,413
Navy "	362,691	380,540	17,849	—
Interior "	4,733,336	4,774,280	40,944	—
Public Lands Service	2,856,242	2,351,440	—	504,802
Eleventh Census	5,942,977	1,256,423	—	4,686,554
Miscellaneous	1,749,151	1,686,067	—	63,084
Post Office Department—				
Salaries and Expenses	852,993	876,817	23,824	—
Deficiency in Postal Revenues	4,741,772	4,051,490	—	690,282
Mail Transportation, Pacific railroads..	1,343,888	1,688,379	344,491	—
Miscellaneous	9,874	772	—	9,102
Department of Agriculture—				
Salaries and Expenses	1,797,147	2,943,862	1,146,715	—
Dept. of Labour—Salaries and Expenses	143,682	168,259	24,577	—
Department of Justice	6,618,193	5,212,811	—	1,405,382
District of Columbia—				
Salaries and Expenses.....	5,635,511	6,331,961	696,450	—
Ten-year Funding Bonds	—	2,412,744	2,412,744	—
Total—Civil Establishment	110,048,167	99,841,989	—	10,206,178

* Among these are the following items:—

	1891.	1892.
	\$	\$
Rebate of Tax on Tobacco	770,082	348,856
Regulating Immigration	170,598	232,944
Chinese Exclusion	48,949	63,021
Smithsonian Institution	108,950	113,880
Columbian Exposition	169,378	519,876
Expenses of Treasury Notes	218,363	249,468
French Spoliation Claims.....	1,085,240	102,441

Source.	1891.	1892.	Increase.	Decrease.
<i>Military Establishment.</i>	\$	\$	\$	\$
Pay Department	14,606,422	13,936,796	—	669,626
Quartermaster's Department	9,234,601	7,209,850	—	2,024,751
Ordnance	2,869,618	4,694,947	1,825,329	—
Improving Harbours	3,490,162	4,473,678	983,516	—
„ Rivers	8,760,465	8,543,530	—	216,935
Miscellaneous	9,758,797	8,036,655	—	1,722,142
Total— <i>Military Establishment</i>	48,720,065	46,895,456	—	1,824,609
<i>Naval Establishment.</i>				
Increase of the Navy	10,609,197	13,756,500	3,147,303	—
Pay of the Navy	7,210,291	7,041,529	—	168,762
Miscellaneous items	8,294,408	8,376,110	81,702	—
Total— <i>Naval Establishment</i>	26,113,896	29,174,139	3,060,243	—
Indian Service	8,527,469	11,150,578	2,623,109	—
Pensions	124,415,951	134,583,053	10,167,101	—
Interest on the Public Debt	37,547,135	23,378,116	—	14,169,019
Total	355,372,685	345,023,331	—	10,349,354
Postal Service	65,931,786	70,930,476	—	—
Grand total	421,304,471	415,953,807	—	—

The estimates for 1893 made by Mr. Foster, late Secretary of the Treasury, were as follows:—

Estimated Receipts.

	\$
From Customs	198,000,000
„ Internal Revenue	165,000,000
„ Miscellaneous Services	20,000,000
„ Postal Service	80,336,350
Total	<u>463,336,350</u>

Estimated Expenditure.

	\$
For the Civil Establishment	108,000,000
„ Military „	49,000,000
„ Naval „	31,000,000
„ Indian Service	9,000,000
For Pensions	158,000,000
„ Interest on the Public Debt	26,000,000
„ Postal Service	80,336,350
Total	<u>461,336,350</u>
Estimated surplus	<u>2,000,000</u>

Sinking Fund.

By an Act of 25th February, 1862, 1 per cent. of the entire debt of the United States must be annually set aside as a sinking fund, and applied to the purchase or payment of the public debt in such a manner as the Secretary of the Treasury may from time to time direct.

The total requirements of the fund to 30th June, 1892, as shown by the appended table, aggregate 924,394,426 dollars 34 c. (184,878,885*l.*). The bonds and other securities annually applied to the fund, including interest paid thereon, aggregate 935,337,061 dollars (187,067,412*l.*), and the total redemption of the debt, including amounts applied to the fund since 31st August, 1865, when the debt attained its highest point, aggregated 1,914,905,107 dollars (382,981,021*l.*), or 990,510,681 dollars (198,102,136*l.*) more than was required to be paid by the terms of the Sinking Fund Act:—

Statement showing the Annual Requirements of the Sinking Fund, the Amount of Bonds and other Securities applied thereto, the Interest and Premium Paid thereon, and the Total Amount Expended for the Fund from 1st April, 1869, to 30th June, 1892.

Fiscal Year.	Annual Requirement.	Applications to the Funds.			
		Bonds and other Securities.		Interest and Premiums Paid.		Total Amount Applied.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1869	6,725,809 63	8,691,000 —	1,511,243 23		10,202,243 23
1870	27,660,879 14	28,151,900 —	4,098,057 22		32,249,957 22
'71	28,574,562 78	29,936,250 —	2,910,413 73		32,846,663 73
'72	29,958,187 82	32,618,450 —	4,365,958 72		36,984,408 72
'73	30,222,250 79	28,678,000 —	4,063,643 62		32,741,643 62
'74	30,852,447 93	12,936,450 —	1,617,659 83		14,554,109 83
'75	31,519,501 18	25,170,400 —	353,061 56		25,523,461 56
'76	33,584,775 82	32,183,488 9	257,517 91		32,441,006 —
'77	33,729,833 20	24,498,910 5	5,776 52		24,504,686 57
'78	35,429,001 80	17,012,634 57	809 92		17,013,444 49
'79	36,955,604 63	723,662 99	308 77		723,971 76
1880	40,135,450 —	73,904,617 41	3,731,272 2		77,635,889 43
'81	42,737,616 13	74,480,351 5	1,768,670 39		76,249,021 44
'82	44,905,330 76	60,137,855 55	612,039 53		60,749,895 8
'83	45,389,026 —	44,897,256 96	329,761 48		45,227,018 44
'84	46,486,536 4	46,790,229 50	318,879 93		47,109,109 43
'85	47,393,186 83	45,604,035 43	271,667 32		45,875,702 75
'86	44,872,710 64	44,551,043 36	242,487 45		44,793,530 81
'87	46,537,849 60	47,903,248 15	232,083 42		48,135,331 57
'88	46,818,149 18	43,732,550 —	3,085,592 98		46,818,142 98
'89	47,804,172 99	39,066,173 35	8,737,253 4		47,804,126 39
1890	48,321,127 76	39,847,839 50	8,473,506 6		48,321,345 56
'91	49,077,301 37	44,006,111 37	5,070,950 22		49,077,061 59
'92	49,063,114 32	37,574,179 98	181,109 2		37,755,289 —
Total	924,394,426 34	883,096,637 31	52,240,423 89		935,337,061 20

	Amount.	
	\$	c.
The total debt of the United States, less cash in the Treasury, at its maximum point, 31st August, 1865, was	2,756,431,571	43
On 30th June, 1892, it was	841,526,463	60
Making a reduction of the debt, less cash in the Treasury, of	1,914,905,107	83
Or 990,510,681 dollars 49 c. more than the requirements of the sinking fund called for		

Mr. Foster in his report strongly urges the repeal of the Act "in view of the very large decrease of the debt already effected in excess of the legal requirements of the Act, coupled with the probable future condition of the national finances."

The following table shows the sinking fund account for the fiscal year 1892:—

Debtor.

Date.	Description.	Amount.	
		\$	c.
1st July, 1891	To balance from last year	—	4
	To 1 per cent. on the principal of the public debt on 30th June, 1891, less coin and currency certificates held in cash, and cash available for the reduction of the debt viz., 905,806,560 dollars 61 c.	9,058,065	61
	To interest on redemption prior to fiscal year 1892	38,917,459	24
30th June, 1892	To interest on 37,574,179 dollars 98 c., amount of debt paid during the fiscal year 1892	1,087,589	47
	Total	49,063,114	36

Creditor.

Date.	Description.	Amount.	
		\$	c.
30th June, 1892	By principal of bonded debt redeemed in 1892	24,310,800	—
	By accrued interest thereon	180,412	20
	By fractional currency and notes redeemed in 1892	8,496	98
	By accrued interest thereon	696	82
	By National Bank notes redeemed	13,254,883	—
	By balance	11,307,825	36
Total		49,063,114	36

The balance due to the sinking fund 30th June, 1892, was 11,307,825 dollars 36 c. (2,261,565/.), and the requirements of the

fund for the fiscal year 1893 have been estimated by Mr. Foster at 48,693,000 dollars (9,738,600*l.*), showing that at the end of the fiscal year 1893 there will be due to the sinking fund 60,000,000 dollars (12,000,000*l.*). Add to this the estimated requirements of the fund for 1894 (48,700,000 dollars), and there will be due to the sinking fund on 30th June, 1894, a little more than 100,000,000 dollars (20,000,000*l.*), with no available revenues to meet such a charge.

Loans and Currency.

Since 1st March, 1889, when the Republican Party came into power, there have been purchased and cancelled United States bonds of the face value of 233,729,150 dollars (46,745,830*l.*), for which there was expended the sum of 270,952,431 dollars (54,190,586*l.*). Of the bonds so purchased, 121,615,950 dollars (24,323,190*l.*) were 4 per cents., and 112,113,200 dollars (22,422,640*l.*) 4½ per cents. The expenditure was 55,352,493 dollars (11,070,598*l.*) less than the sum which would be required to redeem the bonds and pay interest thereon to the date of their maturity.

25,504,700 dollars (5,100,940*l.*) 4½ per cent. bonds were re-deemed at par during the same period, and a further amount of 25,364,500 dollars (5,072,900*l.*) of the same loan has been continued during the pleasure of the Government to bear interest at the rate of 2 per cent. per annum.

The annual interest charge on 1st March, 1889, was 34,578,459 dollars (6,915,691*l.*); at the end of November, 1892, it was 22,893,990 dollars (4,578,798*l.*).

The volume of money in circulation has increased during the twelve months ended 1st November, 1892, as shown by the following table:—

Description.	Amount.	
	1st November, 1891.	1st November, 1892.
	\$	\$
Gold coin	406,770,367	411,252,197
Standard silver dollars	62,135,461	61,672,455
Subsidiary silver	62,105,136	65,985,408
Gold certificates.....	136,100,319	120,255,349
Silver „	321,142,642	324,552,532
Treasury notes, 1890.....	66,473,484	114,567,423
United States notes	332,553,989	332,080,234
Currency certificates, 8th June, 1872	10,765,000	10,550,000
National Bank notes	166,445,763	165,224,137
Total	1,564,492,161	1,606,139,735

The principal changes are in gold certificates and Treasury notes of the Act of 14th July, 1890. Of the former there is a decrease of 15,844,970 dollars (3,168,994*l.*), and of the latter an increase of 48,093,939 dollars (9,618,787*l.*).

The increase in circulation since 1st March, 1889 was 201,933,839 dollars (40,386,767*l.*), of which 152,048,345 dollars

(30,409,669*l.*) were paper money. The amount of paper money held in the Treasury, 1st March, 1889, was nearly 30,000,000 dollars greater than on 1st November, 1892, while the net increase in the issue was 122,366,433 dollars (24,473,286*l.*). A notable fact, according to the Secretary's report, connected with this increase is the large quantity of notes of the smaller denomination added to the volume of money, while, at the same time, there has been a decrease in the higher denominations. This is shown in the accompanying table:—

Table showing the Amounts of Paper Currency, by Denominations, Outstanding on 1st March, 1889, and on 1st November, 1892, and the Changes during that Period.

Denomination.	Outstanding 1st March, 1889.	Outstanding 1st November, 1892.	Decrease.	Increase.
	\$	\$	\$	\$
1's (ones)	31,438,141	40,460,624	—	9,022,483
2's (twos)	22,986,476	31,629,049	—	8,642,573
5's (fives)	204,567,948	242,635,169	—	38,067,221
10's (tens)	246,407,325	291,553,306	—	45,145,981
20's (twenties)	191,306,880	223,171,280	—	31,864,400
50's (fifties)	49,129,090	42,012,665	7,116,425	—
100's (one hundreds)	68,868,870	75,679,070	—	6,815,200
500's (five hundreds)	25,883,500	22,329,000	3,554,500	—
1,000's (one thousands)	53,597,000	50,921,500	2,675,500	—
5,000's (five thousands)	35,385,000	28,380,000	7,005,000	—
10,000's (ten thousands)	65,900,000	69,060,000	—	3,160,000
Total	995,465,230	1,117,831,663	20,351,425	142,717,858
Less decrease	—	—	—	20,351,425
Net increase	—	—	—	122,366,433

National Banks.

One hundred and sixty-three banks with an aggregate capital of 15,285,000 dollars (3,057,000*l.*), were organised in the United States during the fiscal year ending 30th June, 1892; 53 went into voluntary liquidation, and 17 became insolvent, leaving a net increase of 93 for the year.

Of the new banks organised during the year, about one-half were west of the Mississippi River, and 35 per cent. were in the Southern States.

The total number of banks in operation, 31st October, 1892, was 3,788, having an aggregate capital of 693,868,665 dollars (138,773,733*l.*), and surplus and undivided profits of 340,524,179 dollars (68,104,835*l.*). The total amount of individual deposits was 1,765,422,983 dollars (353,084,596*l.*); total bank deposits 530,653,202 dollars (106,130,640*l.*), and total resources, 3,510,094,897 dollars (702,018,979*l.*). The national bank circulation outstanding shows a net increase of 10,487,286 dollars (2,097,445*l.*), and the gold held by the banks as compared with last year, shows an

increase of 21,994,115 dollars (4,398,821*l.*). Surplus and undivided profits, increase 9,663,020 dollars (1,932,604*l.*); individual deposits, increase 177,104,902 dollars (35,420,980*l.*); bank deposits, increase 100,058,428 dollars (20,011,685*l.*).

Internal Revenue.

The receipts from the several objects of taxation under the Internal Revenue Laws for the fiscal years ending 30th June, 1891 and 1892 were as follows:—

Objects of Taxation.	Fiscal Year ended 30th June,		Increase.	Decrease.
	1891.	1892.		
	\$ c.	\$ c.	\$ c.	\$ c.
Distilled spirits	83,335,963 64	91,309,983 65	7,974,020 1	—
Manufactured tobacco	32,796,270 97	31,000,493 7	—	1,795,777 90
Fermented liquors.....	28,565,129 92	30,037,432 77	1,472,322 85	—
Oleomargarine	1,077,924 14	1,266,326 —	188,401 86	—
Miscellaneous.....	260,127 30	243,288 86	—	16,838 44
Total	146,035,415 97	153,857,544 35	7,822,128 38	—

Recapitulation.

	Amount.	
	\$	c.
The receipts from all sources of internal revenue for the fiscal year ending 30th June, 1892, were.....	153,857,544	35
The receipts from the same sources for fiscal year ended 30th June, 1891, were	146,035,415	97
Making an increase in the receipts for the fiscal year just ended of	7,822,128	38

According to the estimate of Mr. Foster, the late Secretary of the Treasury, the receipts from all sources of internal revenues for the fiscal year ending 30th June, 1893, will aggregate 165,000,000 dollars (33,000,000*l.*).

The total production of distilled spirits, exclusive of fruit brandies, for the fiscal year ended 30th June, 1892, was 114,769,041 taxable gallons; the total production for the fiscal year ended 30th June, 1891, was 115,962,389 gallons, making a decrease in the production of 1,193,348 gallons for the last fiscal year.

There were also produced during the fiscal year ended 30th June, 1892, 1,310,437 gallons of apple brandy, 99,398 gallons of peach brandy, and 2,257,630 gallons of grape brandy, making a total production of 3,667,465 gallons of brandy from fruits.

During the fiscal year ended 30th June, 1892, 5,925 distilleries of all kinds were operated; for the preceding fiscal year 3,819 distilleries only were operated, showing an increase of 2,106 distilleries

for the last fiscal year. The greater portion of this increase arose from the large number of fruit distilleries operated during the year.

During the last fiscal year there were produced 31,856,626 barrels of beer in the United States. The number of barrels produced during the year ended 30th June, 1891, was 30,497,209, making an increased production for the last fiscal year of 1,359,417 barrels.

The total receipts from the taxes on tobacco, cigars, cigarettes, snuff, &c., for the fiscal year ended 30th June, 1892, were 31,000,493 dollars (6,200,098*l.*), a decrease of 1,795,777 dollars (359,155*l.*) compared with the receipts for the year ending 30th June, 1891. This decrease is attributed by the Secretary of the Treasury to the operations of the Act of 1st October, 1890.

The principal features of the last four financial years have been the gradual shrinkage of the surplus and the increase in the Government expenditures.

In the spring of 1889, when the Republican party came into power, there was a surplus in the Treasury of upwards of 100,000,000 dollars. Last year it was barely 10,000,000. This year it will hardly reach 2,000,000 dollars, and next year there will probably be a deficit.

The chief causes of this change have been the extravagance of the 51st and 52nd Congresses, the reduction in revenues due to the McKinley Act, and the enormous increase in the payment of pensions. From 1872-79 the sum annually paid for pensions by the United States Government did not exceed 30,000,000 dollars. In 1891 it had risen to 124,415,000 dollars, and during the present fiscal year it reached a total of over 160,000,000 dollars. Fifteen years after the war there were 250,800 pensioners on the roll. Four years ago there were less than 500,000, and this year there are over 900,000.

Remarks on the present Monetary Situation in the United States.

The present fiscal year has been marked by great financial depression in the United States. There has been a vast fall in all sorts of securities dealt in on the New York Stock Exchange, amounting, according to a leading New York newspaper, to a depreciation of no less than 700,000,000 dollars. Failures have been numerous all over the country, the total liabilities of all the failures which occurred during the first six months of 1893 amounting to 168,000,000 dollars, against 62,000,000 dollars for the same period in 1892, showing an increase of 106,000,000 dollars. Two great railroad systems, the Richmond Terminal and the Reading have collapsed, and many other roads have been seriously affected. The National Cordage Company, an enormous industrial concern, has been forced into liquidation. Many western land companies have suspended, and their suspension has been followed by the stoppage of innumerable small western banks which were doing business with too much credit and too little capital. In short, the year has been most disastrous.

A variety of causes has brought about this state of affairs. A

short corn crop and the low price of cotton last autumn cut down railroad earnings and caused much loss to the cotton mills. The iron and steel industries became congested owing to the sudden cessation of railway extension. The farmers in the west found it hard to meet their debts, owing to the low price of wheat, and money was needed to give them relief. The balance of merchandise trade for the first time in many years began to set steadily against the United States, gold began to be exported in alarming proportions, and the great stringency resulting therefrom, forced thousands of speculating accounts into liquidation. But perhaps the chief and fundamental cause of the depression has been the silver legislation of Congress.

The history of this legislation is briefly as follows:—

The operations of the United States mint commenced in 1792, and from that time to 1873 the total amount of silver dollars coined was 8,045,838 dollars. In 1873 the coinage of silver was stopped by Act of Congress, but in 1878 it was resumed under the Bland Act, by the terms of which the Secretary of the Treasury was directed to purchase, and coin into standard silver dollars of 412½ grains each, not less than 2,000,000 dollars worth, nor more than 4,000,000 dollars worth, of silver bullion each month. Under this Act the Government purchased 291,292,019 ounces of fine silver at a cost of 308,199,262 dollars, and coined it into silver dollars to the amount of 378,196,793 dollars. But the silver advocates in Congress were not satisfied with this enormous absorption of silver, and in June, 1890, the Senate passed a Bill for the unrestricted coinage of silver for individuals into legal dollars at the ratio of 16 to 1, and the issue of paper certificates against such dollars. There was a strong probability that this Bill would pass the Lower House, and as a compromise measure the Act of 14th July, 1890 (called the Sherman Act), was passed, which required the monthly purchase by the Treasury Department of 4,500,000 ounces of silver (instead of 2,000,000 dollars worth as under the Act of 1878), and the coinage into silver dollars, monthly, until 1st July, 1891, of 2,000,000 ounces of the silver so purchased, the coinage of silver dollars after that date being left to the discretion of the Secretary of the Treasury.

Under the operation of this Act the United States Treasury has purchased from 13th August, 1890 (when the law went into effect), to the 1st June, 1893, 152,413,792 ounces of silver at a cost of 143,591,569 dollars. Of this there has been coined into silver dollars to 1st June, 1893, 30,087,040 dollars, making the total coinage of silver dollars (including the re-coinage of trade dollars into standard dollars) from 28th February, 1878, to 1st June, 1893, 419,332,305 dollars (or more than fifty times as much as was coined during a previous period of eighty-one years), leaving in the Treasury 123,911,185 ounces of fine silver uncoined.

At the market price of silver on the 1st June, 1893 (83 c. per ounce), the loss on this bullion so purchased by the Government amounted on that day to 83,518,628 dollars. At the present moment bar silver is only worth 73 c. per ounce, entailing an additional loss of 44,583,432 dollars upon the Government.

In payment of the silver purchased under the Sherman Act the United States Government issue notes payable "in coin." The Act, however, requires the Government to maintain the parity between gold and silver, and in order to comply with this provision they are forced to redeem the notes in gold or in an amount of silver equal to their face value in gold. Both the Republican and Democratic Secretaries of the Treasury have so interpreted the Act, and under this interpretation the silver purchased by the Government cannot be used in redemption of the coin notes. A statement issued by the present Secretary of the Treasury, Mr. Carlisle, shows that during the eleven months beginning 31st May, 1892, and ending 1st May, 1893, the coin notes issued for the purchase of silver bullion under the Act amounted to 49,961,184 dollars, and that during the same period the amount of such notes paid in gold was 47,745,173 dollars. It thus appears that all the silver bullion purchased during that time, except 2,216,011 dollars worth, was paid for in gold, while the bullion itself is stored in the vaults of the Treasury, and can neither be sold nor used for the payment of any kind of obligation. It therefore lies idle, and is of no practical value as an available asset.

But while the purchase of this bullion every month is made compulsory, no provision has been made to obtain the gold to redeem the coin notes. Every increase in the number of notes involves an obligation to acquire a larger supply of gold. As these notes are forced into circulation they displace and expel some other form of currency, and as gold is the only money of international value, it is steadily withdrawn from the Treasury for export. The consequence has been that the gold reserves of the Government have been rapidly diminishing, while the gold obligations, through the issue of the coin notes, have been as rapidly increasing. The stock of gold in the Treasury in June, 1890, was 187,380,628 dollars, but on 1st June, 1893, it had fallen to 95,048,640 dollars, or nearly 5,000,000 dollars below the reserve line.

But although the Sherman Act, by the volume of paper money which has been, and is still, growing into circulation, has greatly aided the exports of gold, it cannot be said to be solely responsible for the large outflow of that metal from the United States during the present year. The demand for the metal by the Austrian Government for the purpose of establishing her currency upon a gold basis has been both large and unusual.

The balance of the merchandise trade of the United States has been against her for the year, as has before been stated.

And, lastly, the enormous sums of money spent annually by Americans abroad and sent home by servants and immigrants must be taken into consideration. Mr. Foster, the late Secretary of the Treasury, stated, on 25th February last, before the Ways and Means Committee of the House of Representatives appointed to inquire into the condition of the Treasury, that he estimated the amount spent annually by Americans abroad at 120,000,000 dollars, and the servant girl fund sent abroad at 12,000,000 dollars. Add to this the large sums sent home from the United States by the Chinese and the Italians, and nearly 150,000,000 dollars of the

annual gold exports from the United States will be accounted for. Moreover, these exports are more likely to increase than diminish in the future, and they should not, therefore, be overlooked in speculating on the reasons for the continual outflow of gold from the United States.

The following table shows the exports of gold from the United States from 1888 to 1893 :—

	Year.	Amount.
		Gold dollars.
	1888.....	34,526,447
	'89.....	50,933,460
	'90.....	24,063,074
	'91.....	79,086,581
	'92.....	76,532,056
	'93 (five months)	63,106,266
	Total	328,247,884

During the same period the imports of gold have amounted to \$14,683,035 dollars, as follows :—

Table showing the Import of Gold Coin and Gold Bullion during the Years 1888-93.

Year.	Port of New York.	Port of San Francisco.	All other Ports.	Total.
	\$	\$	\$	\$
1888	6,005,756	3,950,351	1,004,666	10,960,773
'89	6,304,267	4,617,871	1,082,494	12,004,632
'90	13,212,739	5,806,220	1,211,131	20,230,090
'91	31,968,398	10,011,453	2,990,259	44,970,110
'92	8,504,513	6,045,917	2,900,516	17,450,946
1893.				
January	86,893	36,585	247,365	370,843
February	879,605	9,423	368,511	1,257,539
March	4,194,134	22,666	2,391,637	6,608,437
April	644,071	13,384	146,530	803,985
May	25,680	—	—	25,680
Total	71,826,056	30,513,870	12,343,109	114,683,035

As will be seen, there was a net loss to the United States during the five years by gold exports of 213,564,849 dollars; but the return gold from Europe (all of which comes in at the port of New York) amounted to only 71,826,056 dollars, so that the actual loss from exports to Europe was 256,421,828 dollars.

In addition to 380,169,081 silver dollars and silver certificates in circulation on 1st June, 1893, there were outstanding at the same date 335,977,323 dollars in United States notes, and 132,505,183 dollars in redeemable-on-demand in gold Treasury notes, with an available gold reserve of 95,000,000 dollars.

The amount of money of all kinds in circulation, 1st June, 1892, was 1,613,572,244 dollars, while on 1st June, 1893, it was reduced to 1,596,151,901 dollars, a reduction of over 17,000,000 dollars in the last year, thus showing that silver purchases do not always increase the currency.

The amount of money in circulation *per capita* among the people of the United States on 1st June of every year from 1873 was as follows:—

Year.	Amount.	Year.	Amount.
	\$ c.		\$ c.
1873.....	18 3	1884.....	22 65
'74.....	18 13	'85.....	23 2
'75.....	17 16	'86.....	21 82
'76.....	16 12	'87.....	22 45
'77.....	15 58	'88.....	22 88
'78.....	15 32	'89.....	22 52
'79.....	16 75		
1880.....	19 41	1890.....	22 82
'81.....	21 71	'91.....	23 41
'82.....	22 37	'92.....	24 47
'83.....	22 91	'93 (1st June)	23 88

These figures would seem to prove that abundant circulation does not necessarily bring about great prosperity. From 1879 to 1883 the United States enjoyed the most prosperous times of the last twenty years, and the average *per capita* circulation during that period was 20 dollars 61 c. From 1890 to the present time, a period of great monetary stringency and commercial depression, the average was 23 dollars 65 c.

Gold coin and gold certificates in circulation decreased in the last year 56,790,953 dollars, while silver dollars, silver certificates, and Treasury notes based on silver increased in the same period 41,218,502 dollars. The gold receipts of the Government, which in July, 1890, amounted to over 95 per cent. of the total receipts from customs, have fallen to less than 1 per cent.

IV.—*Trade of Siam.*

THE following short account of the trade of Siam, compiled from the Report for the year 1892, on the trade of the district of Her Majesty's Consulate General at Bangkok (Foreign Office Series, No. 1,297), is of more than general interest just now, in consequence of the strained relations between France and Siam.

The amount of shipping cleared and entered at Bangkok during 1892 was 10 per cent. less than in 1891, and about 47 per cent. less than in 1890; the total entries at the port in 1892 being 292 ships, with a tonnage of 209,745 tons, and the clearances

285 ships, of 201,145 tons. The decrease was owing to the unusually poor rice crop, which is the staple article exported. 87 per cent. of the shipping is in the hands of the British, the Germans coming next with 7 per cent. The British have suffered less from the depression in the shipping trade than other countries trading with this port. Part of the junk trade, which amounts to about 2 per cent. of the total trade of the country, is also in the hands of the British. The French shipping interest is very small; there is a steamer running monthly between Saigon and Bangkok, but the value of the cargoes exported and imported by it during 1892 were but 0.03 per cent. of the whole trade. This steamer is kept running by the French government, though at a considerable loss.

The total imports at the port of Bangkok amounted to 1,295,964*l.* in 1892, a decrease of about 145,000*l.* compared with 1891. Most of the principal articles imported show a falling off; cotton manufactures have decreased 8 per cent. in comparison with 1891. Kerosene, which is rapidly superseding the use of cocoanut and pea oils, and which penetrates to distant parts of the country, notwithstanding the difficulties of transport, was imported to the value of 50,000*l.* in 1892, a decrease of over 11,000*l.* compared with the previous year. This trade is in the hands of two firms, one British, the other German, and competition between them is very keen. Opium was imported to the extent of 500 chests in 1892, and 1,200 chests in 1891; this decrease is but apparent, however, for in 1891 the price of opium was very low, hence the large purchases that year; the actual annual demand is from 800 to 900 chests. The consumption of this drug is confined almost entirely to the Chinese, only the lowest classes of the Siamese frequenting the opium dens of Bangkok.

There has been an increase in the imports of machinery and hardware, due to the unusual importations of rolling stock, &c., for the Bangkok-Korat and Bangkok-Paknam railways. There was an increase of over 1,200 tons in the imports of sugar. The sale of matches is very great in Siam, as almost everybody smokes, from 4 years of age and upwards. Nearly all the matches come from Japan, the Swedish having been driven out of the market, those of Japanese manufacture being cheaper and of better quality. English matches are unknown in Siam. Japanese umbrellas are also rapidly supplanting those of European manufacture, as they are very much cheaper and of good quality.

Among the remaining imports may be mentioned salt garlic, Chinese vermicelli, silk trousers, fireworks, joss-sticks, and medicine, which are all imported to supply the special wants of the large Chinese population in this country.

The exports in 1892 amounted to 1,386,560*l.*, 310,000*l.* less than in 1891; the diminished export of rice represents about half of this decrease.

The rice crop of 1891 was poor, but that of 1892 was worse;^s

^s The crop in the north, at Chiengmai, appears however to have been a very good one in 1892.

the export in 1892 was a little over 198,000 tons, as compared with 226,248 tons in 1891, and 479,660 in 1890. The prospects of the crop for 1893 are very favourable.

The exports of teak in 1892 were 14,637 tons, valued at 62,793*l.*, a decrease of 1,463 tons compared with 1891; this is somewhat owing to the continued depression of the London markets. There has, however, been a keen local demand for teak in consequence of extensive building in Bangkok, and the amount sent down from Chiangmai in 1892 has been far above the average, owing to the abundant rains which have filled the rivers. It is also to be noted that 1891, in Upper Siam, was a very dry year, so that a great deal of teak could not be sent down, but remained in the higher lands until 1892.

Pepper is one of the principal exports of Siam, and 1,175 tons were exported in 1892; its price continues to fall, it being 30*l.* 10*s.* per ton for white, and 22*l.* 3*s.* to 13*l.* 7*s.* per ton for black pepper. So recently as 1888, pepper reached the high price of 88*l.* per ton. All the white pepper is shipped to London, and the black to China. The miscellaneous exports amounted to 121,381*l.*, and are as varied in character as the imports. Among them may be mentioned rhinoceros and deer horns, and tiger bones, all of which go to China, where they are used as medicine; the rhinoceros horn is in especial request, and a good sized one will sell for 20*l.* Six and a half tons of birds' nests from the Malay peninsula, valued at 7,676*l.*, were sent to Hong Kong. To this list of curious exports may be added 200 Chinese corpses shipped for burial in China. These have of course been wealthy men; the poorer Chinese follow the usual custom of cremation after death.

One of the most noteworthy acts of the government, which has produced a marked change in the conditions of trade in the country, has been the promulgation of a bankruptcy edict, under which imprisonment for debt has been abolished, and voluntary bankruptcy of native traders in difficulties has been legalised. The immediate result was to increase somewhat the depression caused by the two bad rice crops of 1891-92; but this effect soon wore off, and a healthier system of trade has been created owing to the check this law has given to reckless credit.

Various public works have been in course of construction during the year, notably the Bangkok-Korat railway, 165 miles in length. The Bangkok-Paknam railway was opened in the course of the year, and has proved a success. The Siam Canals and Irrigation Company has also commenced work by opening up the rich lands at the head of the Menam delta. One million acres have already been rendered practicable for rice cultivation. Another noticeable feature is the increase of buildings, both public and private, in the capital. The telegraph system is however very unsatisfactory.

Bangkok possesses a tramway six miles in length, constructed in 1889; a portion has during the last year been equipped with electric plant. This new system has as yet only been in operation a month, but seems to promise fairly satisfactory results. The electric light company got into difficulties, and the plant was taken

over by government, who, however, have not yet taken any further steps to complete the works.

TABLE A.—*Return of Principal Articles of Import into Bangkok during the Years 1891-92.*

Articles.	1892.		1891.	
	Quantity.	Value.	Quantity.	Value.
		£		£
Cotton manufactures.....	—	292,601	—	319,581
Hardware and cutlery	—	83,748	—	33,752
Kerosene oil cases	185,713	50,001	256,610	61,239
Silk goods	—	48,977	—	51,859
Sugar tons	4,995	48,686	3,747	36,327
Jewellery	—	47,057	—	45,230
Cotton yarn	—	41,978	—	57,154
Opium..... chests	500	35,406	1,200	88,000
Crockery and glassware	—	35,197	—	45,243
Gunny bags..... bales	7,022	29,318	5,833	26,426
Cocoanuts pieces	8,460,738	27,226	2,551,710	9,473
Iron, steel, and machinery	—	25,381	—	32,195
Matches cases	11,972	19,511	10,157	20,039
Vegetable lamp-oil „	21,366	15,684	32,972	21,637
Betel nuts	—	14,939	—	10,458
Treasure and gold leaf	—	66,593	—	145,955
Miscellaneous articles	—	413,661	—	436,105
Total	—	1,295,964	—	1,440,673

TABLE B.—*Return of Principal Articles Exported from Bangkok during the Years 1891-92.*

Articles.	1892.		1891.	
	Quantity.	Value.	Quantity.	Value.
		£		£
Rice..... tons	198,022	956,075	226,248	1,083,373
Teak..... „	14,637	62,793	16,100	75,207
Pepper..... „	1,175	53,482	1,541	79,594
Salt fish „	6,284	37,494	9,086	51,924
Woods (other than teak) „	7,297	31,825	7,100	32,720
Bullocks..... heads	16,144	27,390	14,552	26,231
Teelseed..... tons	3,188	23,108	639	5,499
Dried mussels..... „	1,617	22,407	592	9,409
Buffalo hides	1,144	20,005	1,257	26,939
Dried fish	808	11,054	465	14,299
Cardamums	176	10,505	224	15,834
Tin..... „	173	9,041	169	11,703
Miscellaneous articles	—	121,381	—	264,095
Total	—	1,386,560	—	1,696,827

TABLE C.—*Total Value of all Articles Exported from Bangkok, and Imported to Bangkok from and to Foreign Countries during the Years 1891-92.*

Country.	Exports.		Imports.	
	1892.	1891.	1892.	1891.
	£	£	£	£
Singapore	746,647	831,203	872,062	970,847
Hong Kong	495,571	711,103	300,440	389,555
Europe and America..	76,252	86,650	86,675	54,919
Coast	15,713	21,925	27,819	21,353
China	5,537	8,670	8,968	4,089
Other countries	46,840	37,276	—	—
Total	1,386,560	1,696,827	1,295,964	1,440,763

V.—*The French "Conseil Supérieur de Statistique."*

IN May, 1884, a special commission was appointed by the French Minister of Commerce to consider the organisation of a "Conseil Supérieur de Statistique." A "Commission des Tabelles" had been in existence in Sweden since 1756, and a "Central Commission" in Belgium since 1841. Various International Statistical Congresses, held from 1853-72, had recommended the formation of such commissions in each country, and Prussia in 1860, Austria in 1863, and Italy in 1872 had acted upon these suggestions. The question came before the French Chamber more than once, but the only practical result appears to have been the institution of the "Annuaire Statistique." A more important influence was exerted by the report, recommending the creation of such a body and detailing the working of similar councils in other States, which had been published by the Paris Statistical Society in 1882,⁹ and finally in 1884, the above mentioned Committee was formed. It was instructed to discover uniform rules applicable to the different branches of statistics, so as to facilitate the comparison of results, and thus ensure as complete an agreement as possible between official documents, both in the method of classification and in the form of the tables.

It was felt that the creation of a "Service Central de Statistique," as had been suggested, would entail too many changes in the organisation and official reports of the existing departments, and it was therefore decided to establish a Consultative Council, acting as a bond between the different departments, but respecting the autonomy of each. The existing organisation offers the two

⁹ A translation of this Report is to be found in the *Journal of the Statistical Society*, vol. xlv, 1882, p. 606, under the title *Organisation of Government Statistical Offices*.

advantages of competency and responsibility. Each department prepares its own statistics. Each is better acquainted with the resources at its disposal than would be a central bureau, and publishes only what is of general interest; reserving other details which are not suitable for immediate publication, or of which the cost of printing would be too heavy in comparison with their intrinsic value. Besides which, each department employs its own agents, and has means for securing prompt information; while circulars issued by an outside body might not receive the same attention.

A "Superior Council" was therefore formed in February 1885, in accordance with the recommendations of the Committee. It was attached to the Ministry of Commerce, under the presidency of the Minister. Its powers were consultative, and it was to give its advice (1) on the methods, means, forms of inquiry, schedules, &c., which might be submitted to them for their opinion by the different public departments, as well as on the best means of securing as much uniformity as possible in official publications; (2) on the contents and editing of the *Annuaire Statistique de la France*; (3) on the undertaking and publication of fresh statistical inquiries; (4) on the relations to be kept up with French and foreign statistical bureaus; (5) on the organisation of the International Statistical Library to be established at the Ministry of Commerce; (6) on the publicity to be given to the proceedings of the Council; and (7) on questions concerning the teaching and general interests of statistics as a science.

The Council, at its formation and until July of the present year, consisted of 37 members, 12 chosen from the Chamber and Senate, and from Scientific Societies, the other 25 being delegated by the different ministries. Other persons with special knowledge might be invited to give their services temporarily.

The Council in its first session, 1885-86, took into consideration the question, amongst others, of the census which was about to be taken, paying especial attention to the advisability of enumerating the *actual* or the *legal* population; it was finally decided to include both. The evaluation of building property, prepared under the superintendence of M. Boutin,¹⁰ was also the outcome of the recommendations of the Council during the second session; as well as the special census of occupations, and the measurement of colonial areas. Many other inquiries have been set on foot at their suggestion, including those on the teaching of statistics, the conditions of labour, &c., &c.

The Council was nominated for three years, and re-appointed for another three years in 1889. This term of office having now expired, it has been decided to increase the number of members to 55; and the Council was accordingly renewed in July last. It now consists of 3 senators, 3 deputies, 1 member of the "Conseil d'Etat," 1 member of the "Cour des Comptes," 4 members of the Institute, 1 member of the Academy of Medicine, 9 persons chosen

¹⁰ See *Journal of the Royal Statistical Society*, vol. lii, 1890, *Notes on Economical and Statistical Works*, p. 701.

for their special knowledge of statistical subjects, 6 delegates from the Ministry of Finance, 6 from the Ministry of the Interior, 3 from the Ministry of Public Works, 8 from the Ministry of Commerce, Industry and Colonies (including the "Office du Travail"), 3 from the Ministry of War, 2 each from the Ministries of Agriculture and Public Instruction, and 1 each from the Ministries of the Navy, of Justice, and of Foreign Affairs, besides the Minister of Commerce, who presides. The Vice-Presidents are MM. E. Millaud, Jules Roche, and E. Levasseur; MM. de Foville, A. Fontaine, and V. Turquan are Secretaries; MM. Liégeard, March, and Miquel are Assistant Secretaries; and the Council also includes such well known names as MM. Léon Bourgeois, Yves Guyot, Maurice Block, Léon Say, Yvernès, Chervin, Boutin, J. Bertillon, Cheysson, Keller, &c.

VI.—*The National Debt of France.*

THE *Journal de la Société de Statistique de Paris* for August, contains the following tables concerning the national debt in France since 1869, prepared by M. C. Fouquet:—

Years.	Total Debt.	Real Effective Debt.*
	frs.	frs.
1869	13,414,972,937	12,981,215,501
'70	—	—
'71	19,297,205,447	17,913,211,066
'72	22,541,743,997	20,471,371,895
'73	23,274,496,972	22,318,467,121
'74	24,381,861,151	23,496,993,094
'75	24,579,854,314	23,443,044,992
'76	24,601,879,477	23,560,190,482
'77	24,679,735,005	23,698,989,868
'78	25,526,079,908	24,224,428,770
'79	25,989,527,008	24,371,065,996
'80	25,925,189,095	24,279,156,488
'81	27,015,503,003	25,303,144,256
'82	27,231,036,296	25,101,716,526
'83	27,977,874,997	26,418,105,798
'84	28,315,413,547	27,354,069,033
'85	29,216,648,502	28,255,417,935
'86	29,897,051,446	28,740,983,906
'87	30,419,775,639	29,433,651,893
'88	31,043,924,216	29,892,225,335
'89	31,161,442,873	30,054,696,804
'90	31,090,251,052	30,096,147,907
'91	31,660,747,872	30,481,158,926

* Deducting the realisable stock.

M. Fouquet has also estimated the amount of the annual redemptions. The figures prepared by M. Poincaré in the *Rapport*

général sur le budget de l'exercice 1893, are added for comparison :—

Years.	Estimates.	
	Of M. Fouquet.	Of M. Poincaré.
	frs.	frs.
1869	44,003,868	—
'70	—	—
'71	32,469,935	—
'72	194,127,766	—
'73	216,662,241	—
'74	220,995,918	—
'75	249,851,645	—
'76	180,594,849	—
'77	184,377,085	—
'78	186,489,179	—
'79	193,128,831	—
'80	181,206,995	—
'81	194,524,807	—
'82	179,600,811	149,684,300
'83	205,375,611	184,579,100
'84	179,163,077	160,928,800
'85	177,826,235	168,036,900
'86	183,099,194	172,153,800
'87	103,947,773	95,627,600
'88	147,679,371	139,915,200
'89	100,716,941	87,333,100
'90	93,617,389	78,104,700
'91	80,345,894	66,116,400
'92 (estimate)....	—	67,126,000
'93 " "	—	63,155,200
'94 " "	—	66,714,054

VII.—Notes on Economical and Statistical Works.

Growth of English Industry and Commerce—Modern Times. By Rev. W. Cunningham, D.D. Cambridge University Press, 1892.

Two years only have elapsed since Dr. Cunningham published the first portion of this work. The present volume commences with the reign of Elizabeth, and brings the history of our commerce down to 1846. He does not take us beyond that year, for two reasons—first, because sufficient time has not elapsed to enable us to judge fairly of events that have occurred since that date; and, secondly, because he holds that the repeal of the corn laws marks the epoch since which “international agreements and cosmopolitan intercourse have gone so far that an exclusive national policy has proved itself out of date, just as exclusive municipal policy broke down in the Tudor time.” While, in the earlier volume, he described England, first consisting of individuals, each striving for his own good, and afterwards as an agglomeration of towns, the inhabitants of which endeavoured to foster the welfare of their own municipality, he

has now given us a description of the same country (and, later, Great Britain or the United Kingdom) as a nation. The whole book is, to a great extent, a history of the mercantile system, the one object of all the statutes regulating industry and commerce being to advance the prosperity of the country as against other nations, even in the minutest details. "The rationale of the whole was the deliberate pursuit of national power." It was a *sine quâ non* with every such law that it should favour some one or other of England's industries. To this object are due many of the hardships and failures in different occupations during the seventeenth and eighteenth centuries, for what was advantageous to one trade was very often detrimental to another. With this view our colonies, and Ireland also, were treated very much as foreign countries; only such industries were allowed to be carried on as would tend directly to the advantage of some trade in Great Britain, or which did not appear to compete in any way with English industries. All these facts are admirably set out by Dr. Cunningham, and it has been his constant endeavour to show how the various government regulations, on the one hand, and historical events on the other, have acted directly on different branches of trade and industry, and indirectly on other branches with which legislators had by no means intended to interfere. In this object the author has been completely successful, and he has given us a connected history of agriculture, industry, commerce, shipping, banking, taxation, &c. As regards the effects of the mercantile system, Dr. Cunningham holds that it has thoroughly achieved its purpose, and that by its means England built up wealth sufficient to carry her successfully through her "struggle with France," though not without her people enduring great privations. The end justified the means. Since the beginning of the present century the system has been no longer necessary; indeed, with the altered conditions of trade, owing to the increase of population, which has transformed England from an exporter to an importer of corn, and from the vast strides made in industry, owing to the introduction of machinery, the system has been impossible.

This second volume is divided into three books: the Elizabethan age (1558-1603), the Stuarts (1603-89), and the struggle with France (1689-1846), the latter being subdivided into three periods: 1689-1776 (Declaration of Independence), 1776-1815 (Battle of Waterloo), and 1815-46 (Repeal of the Corn Laws). These five parts are all treated similarly; in the first place we have a general survey of the period, and this is followed by chapters on commerce and shipping, plantations or colonies (including Ireland, which, until the Union, was treated as such), industry, agriculture, the poor, finance, taxation, and economic doctrine. It is of course impossible to summarise, in the short space available, all the subjects treated in this volume, but the following are some of the more important features dealt with.

It was in the reign of Elizabeth that the mercantile system was first systematically taken up; plantations also began to be of importance at this time, and it was to Elizabeth that was due the poor law which formed the basis of all relief until 1832, although

the practice in later times differed essentially from that originally contemplated. At about this time also people began to recognise that interest on money lent was not absolutely immoral, and this recognition "marks a distinct departure from the commercial morality which had held its ground from time immemorial." All these vital changes or reforms mark the commencement of the "modern times" of our industry and commerce. Under the Stuarts and during the eighteenth century the most distinctive features of our commerce were perhaps the trading companies, especially the East India Company; and Dr. Cunningham reviews their rise and fall, and, in the case of the latter company, the growth of our Indian empire, and the causes which led to its being taken over by the State. The influence of foreign immigrants on the industry of England can scarcely be over-rated. As regards the growth of taxation, Dr. Cunningham finds ample excuses for the constant requirements of the Stuarts, on the ground that silver had so greatly depreciated that dues on lands—a fixed quantity, and which had in olden times formed the greater portion of the king's revenue—no longer sufficed for the necessities of the crown; hence their constant endeavours to obtain money by extra-parliamentary means, such as customs, selling titles, &c. Elizabeth had contrived to make both ends meet by "personal popularity and public parsimony;" besides which, the need in her case was not so pressing as it afterwards became. It is interesting to read that in the sixteenth century serious apprehension was felt on account of the large areas of arable land that were laid down for pasture. In the seventeenth century, however, the reverse was the case, and land was enclosed for corn crops. In the eighteenth century we have the development of banking, and in the latter half the enormous influence exercised by the numerous inventions in every branch of industry. The last half of the eighteenth century and the first half of the nineteenth is marked by the growing preponderance of industry and trade over agriculture, a change regretted by the author, who more than once speaks of our dependence on "the fluctuating basis of trade instead of the solid basis of land."

Probably the most interesting portions are the chapters on "economic opinion." These, taken together, make up a history of economics, and the criticisms on the opinions of early, and in many cases little-known, writers form a most important contribution to our knowledge of this science in the days before Adam Smith. Their opinions, which are freely quoted, are also invaluable in throwing light on the conditions of the times. There are appendices giving statistics of the population, commerce, shipping, revenue, &c., at various dates, though Dr. Cunningham warns the reader against placing implicit confidence in them.

Report on Wholesale Prices, Wages, and Transportation. Washington: Government Printing Office, 1893.

In these three bulky volumes an elaborate report is contained on a subject, the difficulty of which is scarcely inferior to the interest it must awaken. We refer especially to the first two of the three topics enumerated in the heading of the report. They

are treated together, while the third and last, though by no means unimportant, is compressed into less space, and admits of being distinguished from them. The instructions of the United States Senate to prepare the report were conveyed to the Committee of Finance by a resolution of some two years ago; but, the committee state, "the necessity of elaborate preliminary preparation and careful oversight at every step have delayed the presentation of results." And, as the consequence of this most appropriate care, they express the belief that "the tables and statements submitted furnish a body of statistics upon" the "important subjects" handled "more comprehensive and satisfactory" "than any heretofore collected." "The purpose," which they have had in view, "was to ascertain, through accurate and adequate statistics of prices and wages, the changes which have taken place in the condition, as shown by the relative purchasing power of their earnings, of the great mass of the people in the country for the half-century which has just closed." With this object tables have been prepared and are annexed to the report, showing, with regard to *prices*, (1) the course of wholesale prices of from two to three hundred articles in common use in distinctive markets for the years 1840-91, (2) the wholesale prices of agricultural products in New York, Chicago, and Cincinnati for the same period, and (3) the wholesale prices of the articles included in one of the tables furnished under (1) for October, 1891, and October, 1892. With respect to *wages*, the figures show (1) the rate of wages in nearly one hundred distinct establishments, covering twenty-two industries, for the period of 1840-91, (2) special investigations into the rates of wages and earnings in the coal, iron, glass, and pottery industries for the same period, (3) the salaries of teachers for the same period; and (4) the rates of wages in July, 1891, and October, 1892. At an early stage of the inquiry, however, it became manifestly impossible to carry back the investigation for many of the prices and wages to 1840. The year 1860 has accordingly been taken throughout as the standard, except where it has been otherwise specified. Some general results of the inquiry are furnished in the preliminary statement of the committee, and from this it appears that the prices of 1891, compared with those of 1860 by groups, show for food products a rise of 3·9 per cent., for clothing a fall of 18·9, for fuel and lighting a fall of 9, for metals and implements a fall of 25·1, for lumber and building materials a rise of 22·3, for drugs and chemicals a fall of 13·7, for house-furnishing goods a fall of 29·9, and for miscellaneous articles a fall of 4·9. The number of articles considered under each of these classes, following the order stated above, was 53, 28, 10, 54, 35, 18, 15, and 10, making a total of 223, and the general result showed a fall of prices of 7·8 per cent. For some eighty-five articles the comparison was carried back to 1840, and a table constructed on similar principles to the first shows a fall of 3·7. In these tables no attempt is made to give any weight to the relative importance of the different articles as items of household expenditure; and from a farther table, where such an attempt has been made, it would appear that the cost of living is between 4 and 5 per cent. less in

1891 than in 1860. The committee then furnish a table showing the course which prices have taken during the period of the last half-century, grouping in separate columns the articles by different methods, first striking a simple average, then averaging according to importance on the assumption that certain expenditures remain uniform, and then averaging according to importance for articles comprising 68 per cent. of the total family expenditure, and leaving rent out of consideration. Measured in currency, the highest range of prices is found in the period from 1865-69, but, measured in gold, it is discovered in the succeeding quinquennium. In the two years 1890-91 prices are lower than in any previous period since 1850, when the low price of food rendered the cost of living for the decade 1840-49 somewhat less than it is at present. Agricultural products have been treated separately, and the fall is not so marked in their case as in the prices of commodities in general. Passing on to wages, the committee remark that the investigation conducted under the supervision of Mr. Carroll D. Wright, "presents a vast amount of valuable material covering a very wide range of occupations in a number of industries. No other investigation," they add, "has been made with so wide a scope, such variety of detail, and covering so extensive a period." Here, as with prices, the year 1860 is taken as the standard, and the various industries distinguished in the summary table comprise agricultural implements, with 5 quotations, ale, beer, and porter with 5 also, books and newspapers with 21, the building trades with 39, carriages and waggons with 4, city public works with 23, cotton goods with 131, dry goods (stores) with 3, gingham with 30, groceries (stores) with 2, illuminating gas with 22, leather with 16, lumber with 5, metals and metallic goods with 130, paper with 7, railroads with 11, sidewalks with 4, spice with 5, stone with 19, white lead with 3, and woollen goods with 58. In all there are 543 quotations, and as compared with 1860, the 1891 wages show a rise of 60·7 per cent. As compared with 1840, the rise would be increased to 83·2 per cent., and if the industries be measured in relative importance by the number of persons respectively employed, the average wages of 1891 would stand at 168·6 as compared with 1860, and at 204·4 as compared with 1840. This advance has been accompanied by a diminution in the hours of labour, and, on the basis of an hourly rate, wages in 1891 would stand at 209·0 compared with 1840, and at 176·8 compared with 1860. Tracing the course of wages by successive years and periods of years, it becomes evident that a gradual advance from 1840 to 1860 has been followed by less regular but more rapid progress. From 1875 to 1880 there was a standstill, but since then the advance has been continuous. The salaries of teachers confirm the conclusions thus obtained. They show an advance of 86 per cent. between 1860 and 1891. Supplementary figures bring the information down to 1893. Prices had fallen on a simple average to 89·3, and on a weighted average to 91·7, and wages had undergone no substantial change. The committee were desirous of securing materials for comparison with the American figures from foreign countries, but were unable to undertake any original investigation,

and were therefore limited to an analysis of the figures to be discovered in official documents or obtained from private sources. But they found it difficult to institute any comparisons of value. "European price statistics," they remark, "having a less extensive range than ours, and comprising in the main simply primary products, are not valuable for the purpose in hand," and they add that with respect to wages "it is to be regretted that in published statistics relating to Europe, no figures concerning wages could be found in any way adequate to a comparison with those presented by" themselves. Dr. Falkner, however, their statistician, who has in an elaborate report given a more detailed statement of the results of the general investigation, and a discussion of the methods employed, has reviewed the different tables of price-quotations, which have obtained notoriety in Europe, and has found that, taking the twenty-two articles of the well known list in the *Economist*, the course of their prices varies but little in the United States, England, Hamburg, and France. Dr. Falkner's report is marked by great care, and will reward the study of statisticians in other countries. They will be able to form for themselves a judgment of the adequacy of the methods employed in the comprehensive investigation, of which we have, within the limits of this notice, endeavoured to convey some general idea, and their verdict on the value of the results will be guided no doubt by their opinion of the validity and sufficiency of the methods pursued. But it cannot be denied that a very large and important task has here been undertaken, and that considerable pains have been unsparingly devoted to render it successful. Similar pains have been bestowed on the other inquiry into transportation charges, which the committee justly observe are an important factor in determining prices, "notably those of the great staple products of agriculture, mines, and manufactures." But the student of the report will notice that a minority of the sub-committee expressly guard themselves from being supposed to agree with the conclusions drawn by the majority.

Identification Anthropométrique. Instructions Signalétiques. Par Alphonse Bertillon. (Nouvelle édition.) Melun : Imprimerie Administrative, 1893.

The methods of identification by means of anthropometrical records, which have been recently introduced into the practice of the criminal police in France, have attracted considerable attention, and in the volume before us the author of the system furnishes a complete account of its scientific foundation, its methods of application, and its primary objects. The first edition of the book was published in 1885, but the present work has grown, as the writer states, from an incomplete and hastily compiled pamphlet of 95 pages to a systematic and exhaustive treatise of upwards of 300 pages. The chief increase has taken place in the introduction, containing an *exposé général* of the system, in the second part of the practical injunctions for its application—the part referring to the descriptive accounts of the criminal—and in the album of types appended to the volume. It now presents a complete account of the system and of its practical applications,

and the reader will be impressed by the scientific thoroughness which M. Bertillon has brought to bear upon the elaboration and perfection of the methods of identification, which he has so successfully introduced. As he remarks, all matters of police are in their essence a question of identification, and this has hitherto been left to instinct and routine. His aim is to introduce system and method, to bring the assistance of scientific conceptions, aided by improved mechanical instruments, to the aid of common observation and memory. Photography, for example, the little utility of which has become almost a commonplace, may, if it be only methodised, be changed into an effectual instrument of recognition; but the police must know how to analyse the photograph, to describe it, to learn it, so to say, by heart, for the eye only sees what it looks for, and it only looks for what is already in the mind. In his introduction M. Bertillon distinguishes three varieties of individualisation. The first is by anthropometric measurements, the second by descriptions, and the third by particular marks. The first rests on certain demonstrable truths—the comparative freedom from alteration of the human frame from the age of 20 onwards, the extreme differences between the skeletons of different people when compared with one another, and the ease and precision with which certain dimensions of the skeleton can be measured. The height, for instance, the extent of the outstretched arms, the length and breadth of the head, of the right ear, of the left foot, of the middle finger on the left hand, are some of these measurements, but, to be effectual, one condition is necessary—that they should be taken with precision. For this reason the principles and terms of classification must be settled with care, and observed with rigidity. These anthropometric methods must be supplemented by descriptive accounts where the written word and unaided observation replace the mechanical instrument; but here too there must be agreement upon, and adherence to, certain principles of classification; and M. Bertillon discusses these principles with minute, but by no means unnecessary, care. The third method of identification is by means of particular marks and features. This establishes direct identity, while the anthropometric record eliminates and proves non-identity. A criminal who is at large has, let us suppose, committed a crime. The police, by their description of him, have to detect him amid the crowd, and effect his arrest. The anthropometric record then steps in to prove his individuality. Is he an old offender, or is he committing his first offence? Given the subject, the problem is to find his name. This can only be done within the walls of a prison, and then the identification by particular marks comes in to establish beyond question or doubt the results of the two previous processes. In mathematical language the part to be played by anthropometry is the *réci-proque* of that to be performed by description. The latter, given the name, points out the individual, and the former, given the individual, points out the name, while the record of particular marks finally decides the question. M. Bertillon describes the mode of organisation to be adopted with a view to obtaining the requisite material, and utilising it in practice. He shows that the

number of old offenders detected in Paris since the introduction of the system in 1882, has grown from 49 in that year to 680 in 1892, and he states that the system of anthropometric identification has now been officially adopted in the United States, Belgium, Switzerland, Russia, the greater part of the South American Republics, Tunis, India, and Roumania. He then proceeds to give minute practical directions for obtaining the different kinds of records, and in an album appended to the volume, he furnishes, as we have said, types of the chief varieties of individuals, and their respective features.

History of the English Landed Interest. By Russell M. Garnier. London: Swan, Sonnenschein, and Co., 1892.

In this book Mr. Garnier has attempted to deal with a vast subject on a commensurate scale. In the present volume he brings his history down to the end of the Stuart period, and he thus leaves some two centuries to be treated in another volume which is to follow. For the execution of this immense task he has spared no pains to equip himself with the requisite knowledge. He has had recourse to well-known authorities, and has employed them with discrimination. He has endeavoured—and in a great measure successfully—to compile a harmonious and consistent account from their conclusions, which not infrequently diverge from one another so far as to seem scarcely to admit of reconciliation. He has combined a treatment of the customs and laws with that of the agriculture of English land. The customs are traced from a remote antiquity, as far as the case admits of any reliable deductions from scattered hints; the laws are exhibited in their successive developments, which in so many instances reflect the extraordinary ingenuity of the legal mind in getting round the express provisions of legislative enactment; and this account is accompanied by a picture of the state and methods of agriculture at the times. Commencing with the Roman occupation, Mr. Garnier holds a middle course between those who attribute too much and those who assign too little to its influence. He then passes on to the Anglo-Saxon period, and he endeavours to trace the combined influence of Roman, of British, and of Teutonic systems on Anglo-Saxon land tenure. With the Norman period the development of the feudal system, and its amalgamation with existing institutions, receive notice, together with the compilation of the historic survey of Domesday Book. The Middle Ages follow with the important statutes of *Quia Emptores* and *De Donis Conditionalibus*; and the land laws so familiar to law students then have their origin. The system of entail begins, which was to lead to cumbrous and elaborate attempts to tie up estates and preserve them from alienation, and was to produce also the skilful endeavours of lawyers to defeat the acts, and secure in turn the freer movement, and the stricter preservation, of landed property. Mr. Garnier supplies also an interesting picture of estate management, and of the daily life of the agricultural classes. The transformation of landlord into landowner, with the substitution of money payment for personal service, and the appearance of rent, and the means adopted for the

disposal of farm produce in markets and fairs, are then described. With the Tudor period, the statutes of Fines and Uses mark the progress of the struggle between the ecclesiastical ingenuity of the times and the intentions of the legislature, and the curious origin of our modern system of trustees out of a legal fiction is one of the relics of this struggle. From these ingenuities, which interest by their very subtilty, Mr. Garnier turns, as in previous sections of his book, to give a picture of the life of the times. The general aspect of the country is described in one chapter, the economy of a sixteenth century estate in another, and the methods of work on a sixteenth century farm form the subject of a third chapter. The last section of the book is devoted to the Stuart period. The whole volume will be found to be a careful repertory of information scattered in various quarters; and Mr. Garnier has undoubtedly rendered a service to the student by bringing it together, for the history of the English landed interest is no less important than it is prolific of curious interest.

Philosophy and Political Economy in some of their Historical Relations. By James Bonar. London: Swan, Sonnenschein, and Co., 1893.

This book forms part of a new library of philosophy; and the circumstance should, no doubt, be borne in mind by the economic student, who, coming to it with a prejudice in favour of economics, may at first be disappointed to discover so large a space accorded to philosophers, whose connection with economics may appear somewhat remote. But this impression will disappear on closer acquaintance with the work. Mr. Bonar's purpose will become evident, together with the skill he has shown in its execution. For he has contrived to compress within necessarily narrow limits a review of the general course of philosophy from ancient to modern times. He has given an account of the views of the chief philosophers, with especial reference to their bearing on economics. Sometimes this bearing is manifest, as in the case of Adam Smith, and the conceptions so prevalent in the last century of natural law and natural rights; or in that of the two Mills and Bentham and the Utilitarian philosophy, which is still supposed by not a few observers to be indissolubly connected with economic theory, though Mr. Bonar shows reasons for disputing the necessity of the connection; or, lastly, in that of the Hegelian philosophy and the modern scientific socialism of Marx and Lassalle. Sometimes, again, the connection of philosophy with economics is less evident, and in the ancient, and, to some extent, in the modern world, the two were never formally separated, and therefore, as Mr. Bonar remarks, in a historical retrospect we are "looking for answers to questions which have not been consciously present to the authors embraced in our scrutiny." Mr. Bonar divides his treatment into five books. In the first he deals with ancient philosophy, and examines the conceptions of wealth, of production and distribution, and of civil society, to be found in Plato and Aristotle, and reviews the economics of the Stoics and Epicureans, and of Christianity. In the second book we pass to modern philosophy,

and the notion so attractive and influential, and yet also so vague and delusive, of natural law. The precursors of Grotius—Machiavelli, More, and Bodin—Grotius himself, Hobbes, Harrington, Locke, David Hume, and the Physiocrats, precede the founder of modern economics, Adam Smith, and an ably argued chapter follows on the meaning and value of the conception of natural rights and the law of nature. The next section is devoted to utilitarian economics, with chapters on Malthus, on Bentham, and James Mill, and on the younger Mill. This is followed by a book on idealistic economics in which Kant, Fichte, Krause, and Hegel are treated in successive chapters, and the last book is given up to materialistic economics, with a chapter on Karl Marx, Engels, and Lassalle, a second chapter, to which Mr. Bonar assigns the title of epilogue, and furnishes therein an acute and original survey of the relations of economics to the theory of evolution, and a third and concluding chapter, in which a general summary of the whole work is given. From this cursory notice it will be seen how wide is the field which Mr. Bonar has attempted to cover, and those acquainted with his previous writings will be aware of the excellence and adequacy of the equipment he possesses for the successful accomplishment of his arduous task. His exact knowledge of general philosophy and of economics proper is evident on every page, and by dint of this varied knowledge he has been able to show the extent of the debt they owe to one another. This is a work which, as he observes, has never been attempted before; but it is a work as useful as, now that it has been once accomplished, it seems to be absolutely necessary to the full understanding of economics.

Profit-Sharing and the Labour Question. By T. W. Bushill. London: Methuen and Co., 1893.

It is always instructive to read an account of an actual application to practice of a system which has earned the commendation of theoretical speculators. Mr. Bushill is an employer, who introduced some four years ago the system of profit-sharing into his business of printing, bookbinding, box making, &c. The number of his employées is 185; and it is from his evidence before the Labour Commission that the present book has sprung. In it he sets down faithfully, without apparent bias, his experience of the working of the scheme, and his account contains abundant material for the instruction of the student, and also of the practical man, who may be thinking of adopting any such scheme. Details are furnished together with the opinions of the employées. The book is introduced with a preface from Mr. Sedley Taylor, who has done much to make the scheme known in England, and Mr. David Schloss has also rendered assistance towards the arrangement and collection of valuable matter. In the first four chapters the system, as practised in the writer's firm, is described, in the following three chapters the system generally is considered, and in the last five the author expresses his opinion on labour subjects. These latter chapters, though undoubtedly interesting, might perhaps be open to the suspicion of "padding," but no

doubt can be felt of the great value of the earlier chapters, forming, as they do, a faithful record of actual experience.

An Introduction to English Economic History and Theory. By W. J. Ashley. Vol. i, parts 1 and 2. London: Longmans, Green, and Co., 1892 and 1893.

The recent progress of economic study in this country has been characterised by considerable attention to what is commonly known as economic history. The term is somewhat vague, but by it is meant not so much the application of the historical method to the criticism of economic theory as the investigation of the economic side of history. The former object is by no means excluded from the purview of the writers to whom we are referring, but it may be said to have been the aim of such writers as Cliffe Leslie in a more especial degree, and, largely owing to his argumentative ability, it has left a permanent impress on economic theory as it is usually understood and set forth in recognised text books. But economic historians, among whom Professor Ashley occupies—and deservedly—a very high place, have of late been more inclined to turn their attention from the thankless, and sometimes barren, task of controversy on method to the actual investigation of facts. They have succeeded in throwing many a side light on theory, and they have especially demonstrated the important influence produced upon it by the environment of facts among which it has originated and developed. They have, in short, traced the evolution of theory side by side with the evolution of facts, and in this process they have palliated the extreme censure sometimes passed on the exploded theories of the past. But in the case of Professor Ashley, the spirit of controversy has as far as possible been banished from this investigation, and he has been content to pursue his separate but allied inquiries without quarrelling or interfering with those of the analytical economist. The spirit, which has thus marked his researches, is as refreshing as it is full of good promise for the future. For it is impossible to read his volumes without feeling that economic historians, like analytical economists, have enough to occupy their attention in their own province without trespassing on the territory of their neighbours. The field of economic history is truly immense, and Professor Ashley, starting in the first of the volumes before us with 222 pages devoted to the middle ages, is unable in the second volume to complete his account of the period, and to reach its close in less than 488 pages, and even then is compelled to defer to a later period the more complete treatment of the fifteenth century, and also an intended chapter on foreign trade. Nor is the area to be investigated more extensive than the magnitude of the difficulty of reaching certain information, and of forming definitive conclusions; and Professor Ashley often reviews critically deductions drawn by previous workers. He seems to us to be uniformly successful in making out a strong, if not conclusive, case for the view which he puts forward; and he appears to combine the admirable qualities of examining the evidence with thorough impartiality, and of mar-

shallings it with systematic skill in an arrangement as lucid as it is logical. He has adopted the plan of placing the notes, in which the authorities for the statements in the text are furnished, at the end of each chapter. We have no hesitation in saying that, so far as he has gone at present, his history is the most readable, and, at the same time, the most stimulating that we know. He is never overburdened by his facts, but he is also never independent of them. In his first volume he deals with the eleventh to the fourteenth centuries, and in three chapters he treats of the manor and the village community, of the merchant and craft guilds, and of economic theories and legislation. On the first of these subjects he states the different theories about the origin of the manor, and inclines himself to Mr. Seeböhm's view; in the second he shows how the researches of Dr. Gross modify the older view of a conflict between the merchant and the craft guilds; but in both cases he brings a freshness and independence of treatment to bear on controverted points, and leaves the reader with a clear idea of the state of the matter. In the last chapter his observations on the doctrine of a just price, and the ecclesiastical view of usury, are very instructive, and he returns to this subject in the sixth chapter of his second volume, and traces the history and interpretation of the canonist doctrine. In this second volume he treats of the period from the fourteenth to the sixteenth century. The supremacy of the towns, the crafts, the woollen industry, the agrarian revolution, the relief of the poor, and the canonist doctrine, form the subjects of the successive chapters. In all he throws new light on old questions, and he shows how uncertain is the foundation on which some received opinions rest. The influence caused by the dissolution of the monasteries on the provision for relief of the poor, and the extent and consequences of the enclosures of land, are among the most noticeable of the points on which his criticism thus affects received opinions. It is, in fact, impossible to read a chapter of the work without deriving valuable information, which is evidently based on able and painstaking study of original material, and we look forward with great interest to the appearance of the future volumes.

Statistical and Economical Articles in Recent Periodicals.

UNITED KINGDOM—

Economic Review. Vol. iii, No. 3. July, 1893—

Bimetallism: its meaning and aims: *Prof. H. S. Foxwell.*

Commercial Morality: *Rev. J. Carter.*

Agricultural Contracts in South Italy: *Prof. F. S. Nitti.*

UNITED STATES—

Annals of the American Academy of Political and Social Science.

Vol. iv, No. 1. July, 1893—

Progress of Economic ideas in France: *M. Block.*

UNITED STATES—*Contd.*

Annals of the American Academy of Political and Social Science.

Vol. iv, No. 1. July, 1893—Contd.

Relation of Economic study to public and private charity :
J. Mavor.

Monetary situation in Germany : *W. Lotz.*

Use of silver as money in the United States : *A. B. Woodford.*

Journal of Political Economy. Vol. i, No. 3, June, 1893—

Development of Scandinavian shipping : *A. N. Kier.*

Food supply and the price of wheat : *T. B. Veblen.*

Resumption of specie payments in Austria-Hungary : *F. Wieser.*

Paper currencies of New France : *R. M. Breckenridge.*

Political Science Quarterly. Vol. viii, No. 3, September, 1893—

Giffen's Case against Bimetallism : *C. B. Spahr.*

Theory of the Inheritance Tax : *M. West.*

Quarterly Journal of Economics. Vol. vii, No. 4, July, 1893—

The Problem of Economic Education : *S. Newcomb.*

The Amalgamated Association of Iron and Steel workers :
C. D. Wright.

Ethics of the Single Tax : *J. Lee.*

The Risk Theory of Profit : *F. B. Hawley.*

Quarterly Publications of the American Statistical Association.

New Series. Vol. iii, Nos. 21 and 22, March, June, 1893—

Observations on the measure of Change : *C. H. Cooley.*

Cost Statistics of public Electric lighting : *V. Rosewater.*

Immigration and the Foreign born Population : *Prof. R. Mayo-Smith.*

The value of Percentile Grades : *L. Gulick.*

Yale Review. Vol. ii, No. 2, August, 1893—

The Historic Policy of the United States as to Annexation :
Hon. S. E. Baldwin.

The tendencies of Natural Values : *Prof. E. A. Ross.*

The Bering Sea controversy from an Economic standpoint :
J. Stanley-Brown.

FRANCE—

Annales de l'Ecole Libre des Sciences Politiques. No. 3, July, 1893—

Les Préliminaires du traité du Bardo. (Documents inédits sur les rapports de la France et de l'Italie de 1878 à 1881.)

Les variations du revenu et du prix des terres en France au xvii^e et au xviii^e siècle : *D. Zolla. (Contd.)*

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VIII.—*Additions to the Library.*

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JOURNAL
OF THE ROYAL STATISTICAL SOCIETY,

DECEMBER, 1893.

LIFE and LABOUR of the PEOPLE in LONDON: FIRST RESULTS of an
INQUIRY based on the 1891 CENSUS.

OPENING ADDRESS of CHARLES BOOTH, ESQ., PRESIDENT of the
ROYAL STATISTICAL SOCIETY. Session 1893-94. DELIVERED
21st November, 1893.

IN the introduction to the first volume of my book on this subject, it was pointed out that a double method of inquiry was needed, in order that the condition of the people might be tested in two ways, and the facts be ascertained, first, as to how they live, and second, as to how they work.

The former of these two methods, though carried out pretty fully for the whole of London in vols. i and ii, was felt to require the check afforded by statistics obtained in a different manner; the second test was, save in a few exceptional cases, left over for the more recent and comprehensive statistical basis which I trusted would be afforded by the occupation returns of the census of 1891.

Thanks to the kindness of the Registrar-General,¹ my hopes in this respect have been fulfilled; and I have been permitted to make an early as well as elaborate use of the census figures.

In what follows I propose (a) to show what the statistics are which I have thus obtained, and how the results they afford compare with those of my previous inquiry; (b), to indicate some further general uses that can be made of them; and (c), to refer to the particular purpose to which the material is intended to be put in that account of each industry which will form the staple of my next volume. The intrinsic value of the facts disclosed is such that I think I am justified in laying them without delay before this Society. They are not yet fully digested, but if I can obtain suggestions and criticism now, I shall be able to benefit by these while the work is still in progress.

¹ In thanking the Registrar-General for the great courtesy he has shown me in this matter, I perhaps ought to say that while supplying me with all the information I needed for my purpose, he has never placed in my hands any original documents, or supplied any of the facts, except in such form as to preclude all possibility of individual identification.

The social classification by districts and trades which my information affords, if it is to yield a full value, should not be presented nakedly. For the local divisions I am able, as already indicated, to connect with what is now attempted the work I have already done, and to add a little to it. For the industrial divisions I have yet a good deal to do; but I am trying to connect the social classification of the workers throughout with the terms upon which they work. In the end I hope to be able to complete an account of this great London, which shall be at once truly coloured and sufficiently minute.

PART I.

Classification of the Population of London.

In the census of 1891, each head of family or occupier living in less than five rooms was asked to state the number of rooms occupied; and, in London at least, this information was in most instances obtained by the enumerators. The result is embodied in the report lately issued by the Registrar-General, showing that there were 630,569 occupied tenements of less than five rooms, and giving the following particulars as to the numbers of persons compared to the number of rooms in each tenement:—

Rooms in Tenement.	Number of Tenements with less than Five Rooms.	Number of Occupants of Tenements.					
		One.	Two.	Three.	Four.	Five.	Six.
1	172,502	60,114	55,766	29,005	16,111	7,409	2,871
2	189,707	16,106	46,075	40,168	32,486	24,013	15,526
3	153,189	5,522	27,246	29,151	26,796	22,657	17,293
4	115,171	1,864	12,049	16,645	18,896	18,175	16,294
Total....	630,569	83,606	141,136	114,969	94,289	72,254	51,984

Number of Occupants of Tenements (Contd.).						
Seven.	Eight.	Nine.	Ten.	Eleven.	Twelve or more.	
879	231	72	27	10	7	
8,863	4,195	1,590	488	138	59	
11,953	7,078	3,446	1,377	470	200	
12,801	8,952	5,203	2,573	1,150	569	
34,496	20,456	10,311	4,465	1,768	835	

It must be noted that by "head of family," is meant any one claiming to fill up an independent return or "householder's

"schedule." The "house" indirectly referred to may be but one room, and the household its single occupant. Boarders do not usually expect or obtain separate schedules, and thus as a rule it may be taken that those by whom or for whom the kitchen fire is used form one census family.

The method which I have adopted for restating the facts for my own purposes is as follows: So far as the population are living in less than five rooms per family, the classification is based on the number of persons to each room; so far as they are employers of domestic servants, the classification rests on the number of persons served to each servant; while those who live in five or more rooms, but keep no servants, form a central class.

On this plan those living in each district, or engaged in each trade, fall into three broad divisions, which again may be subdivided as below:—

I. Lower Class—

- (1.) 4 or more persons to each room
- (2.) 3 and under 4 persons to each room
- (3.) 2 " 3 "
- (4.) 1 " 2 "

Families
occupying
less than
5 rooms

II. Central Class—

- (5.) Less than 1 person to each room
Families occupying 5 rooms or more without servants
- (a.) 4 or more persons to 1 servant

III. Upper Class—

- (b.) { 3 or less with 1 servant
4 " more with 2 servants
- (c.) { 3 " less " 2 "
5 " more " 3 "
- (d.) { 3 " 4 " 3 "
5 " 6 " 4 "
7 " more " 5 "

- (e.) { 1 " 2 with 3 servants
3 " 4 " 4 "
5 " 6 " 5 "
7 " more with 6 servants

- (f.) { 1 " 2 with 4 servants
3 " 4 " 5 "
5 " 6 " 6 "
6 " 7 " 7 "

and other families where
number of servants about
equals that of members
of the family

- (g.) { 1 " 2 persons with 5 servants
3 " 4 " 6 "
4 " 5 " 7 "

and other families with
8 or more servants, where
members of family equal
the number of servants

- (h.) { 1 " 2 " 6 "
1, 2, or 3 persons with 7 servants
And all families with more than 8 servants, where the
members of family are less in number than the servants

Families
employing
domestic
servants

In the central class I have included on the one hand, those who, though occupying less than five rooms, are fewer in family than the number of rooms occupied, and on the other hand have counted also those who, though keeping one servant, are not less than 4 in family. For the former are fully as well housed, and the latter are in very much the same social position, as those who without servants occupy a house of five or more rooms.

The above classification embraces the whole population in families as they live, leaving outside of it only the inmates of institutions, hotels, &c. It can be applied to the whole population or to any district or trade, or if desired to any trade in any district.

There are 127 registration sub-districts in London; some of these, being at once small, similar in character and contiguous, I have combined, making finally 114 local divisions suitable for my purpose. As to trades, the census enumerates nearly 350, but many of these apply hardly at all to London, and by combining such as do not demand separate treatment, I have reduced that number to about 90 trades or groups of trades.

The population to be dealt with consists in all of nearly a million families, which, excluding servants, are of the following sizes:—

93,650	consist of 1 person	=	93,650	persons
177,073	„ 2 persons	=	354,146	„
159,282	„ 3 „	=	477,846	„
140,715	„ 4 „	=	562,860	„
114,991	„ 5 „	=	574,955	„
88,894	„ 6 „	=	533,364	„
63,139	„ 7 „	=	441,973	„
41,034	„ 8 „	=	328,272	„
24,028	„ 9 „	=	216,252	„
12,874	„ 10 „	=	128,740	„
11,086	„ over 10 „	=	136,056	„
<hr/>				
Total	926,766 ²		3,848,114	
Institutions, &c. (excluding servants).....			157,771	
Servants			205,858	
			<hr/>	
			4,211,743	

² The "Census of 1891" (vol. ii, p. 20) shows there were 937,606 occupied tenements in London, as against the 926,766 heads of families here returned. A small part of this discrepancy is due to error on our part in abstracting the figures, but the difference is mainly caused by the fact that the census figures include institutions, hotels, common lodging houses, and houses in charge of servants. Considering that these did not comprise "family life" in the ordinary sense, I have excluded from my statement of heads of families those who returned themselves as "heads" in such cases, and the whole class is separately grouped under "hotels, institutions, &c."

It may also be noted that the total of persons counted by me as living in "less than five rooms" exceeds that of the census. This is because it was possible, by careful editing, to assign to their proper place a number of persons who it was evident from their surroundings occupied less than five rooms, although they failed to return themselves as so doing.

As to birthplaces, of these heads of families there were:—

Born in London	461,627	or	49·8	per cent.
„ out of London	465,139	„	50·2	„

or very nearly half and half.

As to employers and employed we find:—

Employers	89,608	} or 1 to 7
Employed	635,883	
Neither employer nor employed	201,275	
<hr/>		
926,766		

The proportion 1 to 7 is for heads of families only—it would be considerably higher for the whole population—as most employers are heads of families, while the employed include many single men, besides a whole host of young persons and women. The comparison between heads of families on each side is, however, good for many purposes.

The average size of family is 4·13 persons, or counting servants 4·34, constituted as follows:—

Heads of Families.	Other Members.						Total.	Per Head of Families.
	Occupied.		Unoccupied.		Servants.			
926,766	983,687	1·05	1,937,661	2·08	196,225	0·21	4,044,339	4·34
Inmates of institutions and their servants							167,404	—
Total population							4,211,743	—

Of these heads of families 741,000 were males and 185,000 females. The family of which a man is the head is commonly more numerous by one person than that of which a woman is the head. If, following this rough rule, we adjust the figures we shall find that in place of 4·13 all round average (excluding servants) we have for families with a male head about 4·45, and for those with a female head 3·45.

Passing now to the social classification, I am able to submit the following table:—

*Classification of the Whole Population of London by Number of Rooms
Occupied or of Servants Kept. **

I. WITHOUT SERVANTS.

Families of			Total Persons.	
Over 10 persons living in 1 room			267	(Class 1.)
10 persons living in 1 room			280	
9 " "	"	"	684	
8 " "	"	"	1,904	
7 " "	"	"	6,363	
6 " "	"	"	17,218	
5 " "	"	"	37,625	
4 " "	"	"	65,052	
Over 10 " "	2 rooms		2,567	
10 " "	"	"	5,030	(Class 2.)
9 " "	"	"	14,373	
8 " "	"	"	34,040	
Over 11 " "	3 rooms		2,518	
3 " "	1 room		88,134	
7 " "	2 rooms		63,126	
6 " "	"	"	94,758	
11 " "	3 rooms		5,335	
10 " "	"	"	14,270	
9 " "	"	"	31,685	
Over 11 " "	4 rooms		7,141	(Class 3.)
2 " "	1 room		112,620	
5 " "	2 rooms		121,980	
4 " "	"	"	132,612	
8 " "	3 rooms		57,776	
7 " "	"	"	85,379	
6 " "	"	"	106,734	
11 " "	4 rooms		13,123	
10 " "	"	"	27,130	
9 " "	"	"	48,861	
8 " "	"	"	75,400	(Class 4.)
1 person living in 1 room			58,670	
3 persons living in 2 rooms			123,738	
2 " "	"	"	93,900	
5 " "	3 rooms		116,285	
4 " "	"	"	110,804	
3 " "	"	"	88,704	
7 " "	4 rooms		93,814	
6 " "	"	"	102,234	
5 " "	"	"	94,835	
4 " "	"	"	79,796	

* I do not propose to deal now with any of the details of this classification, except that I would warn my readers that there may be some error in the figures where ten or more persons are represented as living in one room. There are doubtless cases of very extreme crowding to be found in London, but there will also be instances of erroneous returns, and I have little doubt that in some cases error in the return will be the true explanation.

*Classification of the Whole Population of London—Contd.*I. WITHOUT SERVANTS—*Contd.*

Families of	Total Persons.	
1 person living in 2 rooms	15,725	(Class 5.)
2 persons living in 3 rooms	54,838	
1 " " "	5,299	
3 " " 4 rooms	51,303	
2 " " "	24,520	153,471, or 3'7 per cent.
1 person living in "	1,786	
		(Class 6.)
All families living in more than 4 rooms	—	981,553, or 23'3 per cent.
Total families without servants	—	3,371,789, or 80'1 per cent.

II. WITH SERVANTS.

Families of	Total Persons.	
Over 10 persons with 1 servant	14,261	(Class a.)
10 persons with 1 servant	10,990	
9 " " "	16,875	
8 " " "	24,952	
7 " " "	33,446	
6 " " "	40,368	
5 " " "	44,360	
4 " " "	42,580	
3 " " "	34,143	(Class b.)
2 " " "	20,528	
1 person with " "	4,110	
Over 10 persons with 2 servants	7,467	
10 persons with 2 servants	4,600	
9 " " "	6,579	
8 " " "	9,160	
7 " " "	12,166	
6 " " "	14,700	144,115, or 3'4 per cent.
5 " " "	15,730	
4 " " "	14,932	
3 " " "	12,237	
2 " " "	8,302	
1 person with " "	2,446	
Over 10 persons with 3 servants	3,657	
10 persons with 3 servants	2,030	(Class c.)
9 " " "	2,970	
8 " " "	3,424	
7 " " "	4,375	
6 " " "	5,130	
5 " " "	5,745	
Over 10 persons with 4 servants	2,109	
10 persons with 4 servants	830	57,750, or 1'3 per cent.
9 " " "	990	
8 " " "	1,496	
7 " " "	2,009	

*Classification of the Whole Population of London—Contd.*II. WITH SERVANTS—*Contd.*

Families of	Total Persons.	
4 persons with 3 servants	5,751	(Class d.)
3 " " "	4,623	
6 " " 4 "	2,400	
5 " " "	2,575	
7 or more persons with 5 servants	3,456	18,805, or 0·4 per cent.
1 " 2 persons with 3 servants	3,930	(Class e.)
3 " 4 " 4 "	4,382	
5 " 6 " 5 "	2,301	
7 " more " 6 "	2,745	
1 " 2 " 4 "	1,497	(Class f.)
3 " 4 " 5 "	2,164	
5 " 6 " 6 "	1,411	
6 " 7 " 7 "	503	
And other large families where the number of servants nearly equals the members of the family.....	1,520	7,095, or 0·2 per cent.
1 or 2 persons with 5 servants	741	(Class g.)
3 " 4 " 6 "	1,220	
4 " 5 " 7 "	836	
And other families with 8 or more servants where the members of the family equal the number of servants	229	
1 or 2 persons with 6 servants	—	(Class h.)
1, 2, or 3 " 7 "		
And all families with more than 8 servants where the members of the family are less in number than the servants		
		4,344, or 0·1 per cent.
Total of families with servants	—	476,325, or 11·3 per cent.
Servants in families—		
Where there is only 1 servant	64,677	205,858, or 4·9 per cent.
Where there are 2 servants	52,130	
" 3 "	29,955	
" 4 "	17,240	
Where there are more than 4 servants.....	32,223	157,771, or 3·7 per cent.
Servants in institutions, hotels, &c.	9,633	
Inmates of hotels, &c.	25,726	
" common lodging houses, &c.	20,087	
" large shops, &c.	15,321	363,629, or 8·7 per cent.
" institutions	96,637	
Total population	—	4,211,743

Summary.

3,371,789,	80·1 per cent.,	without servants.
476,325,	11·3 "	with servants.
205,858,	4·9 "	servants.
157,771,	3·7 "	inmates of institutions, &c.
4,211,743,	100·0 per cent.	

The foregoing figures may be restated shortly as follows :—

Without Servants.						Servants.	Living in Institu- tions, &c.	Total.
(1)	(2)	(3)	(4)	(5)	(6)			
4 or more Persons per Room.	3—4 Persons per Room.	2—3 Persons per Room.	1—2 Persons per Room.	Less than One Person per Room.	Over Four Rooms.			
187,921	304,449	781,615	962,780	153,471	981,553	205,858	132,045	3,709,692
4·4%	7·2%	18·5%	23·0%	3·7%	23·3	4·9%	3·1%	88·1%

With Servants.								Living in Hotels, &c.	Total.
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)		
1 Servant 4 or more Persons.	2 Servants 4 or more, 1—3 or less Persons.	2 Servants 3 or less Persons, &c.	Servants fewer than those Served (other).	Servants about equal in numbers to those Served.	4 Servants for 1 or 2 Persons, &c.	5 Servants for 1 or 2 Persons, &c.	6 Servants for 1 or 2 Persons, &c.		
227,832	144,115	57,750	18,805	13,358	7,095	3,026	4,344	25,726	502,051
5·5%	3·4%	1·3%	0·4%	0·3%	0·2%	0·1%	0·1%	0·6%	11·9%

Grand total									4,211,743
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It was with some trepidation that I undertook the comparison of this classification with that obtained from previous investigations. The methods employed were entirely different, and the results of the second inquiry might not be found to support those of the first. In vol. ii of my book on London the population (over estimated at 4,309,000) is divided and described as follows :—

		Per Cent.	Per Cent.
Classes A and B (the very poor)	354,444 or	8·4	(In poverty)
„ C „ D (the poor)	938,293 „	22·3	
„ E „ F (comfortable work- ing class, includ- ing servants).....	2,166,503 „	51·5	(In comfort)
„ G „ H (“lower middle,” “middle,” and “upper classes”)	749,930 „	17·8	
	4,209,170		
Inmates of institutions	99,830		
	4,309,000		(estimated population—1889)

We now have—

		Per Cent.	Per Cent.	Per Cent.
(1.) (2.) 3 or more persons per room	492,370 or	—	12.0	(Crowded.)
(3.) 2 and under 3	781,615	19.0	19.5	31.5
Common lodging houses, &c.	20,087	0.5		
(4.) 1 and under 2 persons per room	962,780	23.4	61.9	(Not crowded.)
(5.) Less than 1 person per room	153,471	3.7		
(6.) Occupying more than 4 rooms	981,553	23.9		
(a.) 4 or more persons to 1 servant	227,832	5.5		
Servants	205,858	5.0	6.6	68.5
Persons living in large shops, &c.	15,321	0.4		
(b.) to (h.) 3 or less persons to 1 servant	248,493	6.0		
Inmates of hotels and boarding houses } where servants are kept	25,726	0.6		
	4,115,106			100
Institutions	96,637			
	4,211,743			

It will be seen that the total percentages “crowded” and “not crowded” agree very nearly with the totals of the previous classification “in poverty” and “in comfort.” The similarity is even startling, and I hasten to say that no such absolute comparison as these figures might suggest can be made. Living in close quarters is no certain test of poverty, and we shall find accordingly that while some districts are more crowded than they are poor, others are more poor than they are crowded. It is only when we take the large average provided by the whole area of London, or when crowding goes exactly hand-in-hand with poverty, that we obtain such an agreement as is shown above.

Taking the figures for all London, and accepting my original Poverty classification as approximately true, it would seem that of those living three or more to a room about one-third are not to be counted as “very poor.” This seems probable enough, especially in those parts of London where rents are very high. This discrepancy is adjusted on the next class, as the “poor” of the old classification are more numerous than those who are living two to three persons per room. Once more, it must not be supposed that there are not some who are far from poor amongst those who live crowded to this extent, but they will be balanced by others who, although poor, have rooms enough. Similarly, among the “central” class—among those occupying a whole house but keeping no servant, or keeping but one servant for four or more persons served—there will be many so called “middle” class people. This is shown by the comparison of the 61 per cent. of the central class with the 51 per cent. of classes E and F. It is indeed probable that the whole of class G on the one table (if I were able to separate it from H) should be added to E and F to compare with the central

division of the new classification. In both classifications the servants have been added to the group to which they socially belong, and in both I have excluded altogether the inmates of hospitals, workhouses and prisons, while the inmates of common lodging houses, of large business establishments, and of hotels are in the second classification, each placed where they socially belong.

Passing to a more detailed examination, the following table of percentages will serve to compare Poverty and Domestic Crowding in each Registration district, and from this the extent to which the one classification diverges from the other will readily be seen. The Districts are arranged in an order beginning with those in which the Crowding exceeds the Poverty, and ending with those in which this is reversed.

	Crowding.	Poverty.	Difference.	
	Per cent.	Per cent.		Per cent.
St. Giles	47	27	Excess of crowding	20
Whitechapel	55½	39	“	16½
Strand	38	24	“	14
Marylebone	41½	27½	“	14
Pancras	42½	30	“	12½
Shoreditch	50½	40	“	10½
St. George's East	59½	49	“	10½
Mile End Old Town	35	26	“	9
St. George's, Hanover Sq.	29½	21½	“	8
Holborn	56½	49	“	7½
Chelsea	32	24½	“	7½
Paddington	27½	21½	“	6
Westminster	40	35	“	5
Bethnal Green	49½	45	“	4½
Stepney	41	38	“	3
Hampstead	16½	13½	“	3
Kensington	26½	25	“	1½
Islington	32	31	“	1
Lambeth	27	26	“	1
Fulham	25½	25	“	½
St. Saviour's	44	43½	“	½
City of London	30	31	Excess of poverty	1
Hackney	19	23	“	4
Woolwich	20½	25	“	4½
St. Olave	36½	42	“	5½
Poplar	30½	37	“	6½
Wandsworth	17½	27	“	9½
Camberwell	18½	29	“	10½
Lewisham	7	18	“	11
Greenwich	19½	36	“	16½

I am able to pursue the comparison wherever requisite into the sub-districts, for although the boundaries of School Board blocks and registration sub-districts are not the same, it has been possible, with a little adjustment, to compare the one area with the other.

Thus we find that the greatest excess of crowding in St. Giles

is found in that part of the district which adjoins Tottenham Court and Charing Cross Roads. Here, no doubt, rents are high, and people, in order to live near their work, are forced to be content with very scanty accommodation. They are crowded in their homes, but otherwise not badly off. Although this part of the district shows this state of things the most, it is true more or less of the whole, and is also true of the Strand, though in somewhat less degree. Here the worst portion lies round about Long Acre and St. Martin's Lane.

Whitechapel, where also crowding outruns poverty, is very different. Here we have great poverty, but even more crowding. This is undoubtedly due to the presence of poor foreign Jews. The sub-district of Spitalfields, which is their headquarters, has 70 per cent. of its inhabitants living 2 or more in a room, 49 per cent. living 3 or more in a room. Mile End New Town is much the same, having 69 per cent. of crowded people. Both districts are much less poor than crowded, but Spitalfields especially so, if my returns can be trusted. It however may be rash to press the comparison too closely. It is enough to point out that the main fact indicated—the crowding of even fairly well to do Jews—is notorious.

In Marylebone, the districts which are responsible for excess of crowding compared with poverty lie near the Edgware Road on the one side, and round about Great Portland Street. It may be that there is more poverty in these districts than we have allowed. In St. Pancras too there is more crowding compared to poverty than I should have expected, but where it is most marked, near Tottenham Court Road, the necessity of living near the great shops is, no doubt, an explanation of the discrepancy.

Tight packing is pretty general in Shoreditch. We find 40 per cent. of poverty against 50 per cent. of crowding. In Mile End Old Town the same relation holds, the percentage of poverty being 25, and of crowding 35. But except for an overflow of Jews from Whitechapel and St. George's, one should not expect to find crowding unaccompanied by poverty, and I am rather inclined to think that the estimate of poverty is wrong, for which opinion I shall show further cause by-and-by. It is to be remembered that the measure of poverty, being based chiefly on the opinions of the school board visitors as to the position and means of the parents of elementary school children, even if fairly trustworthy on the whole, was very liable to local error. An error of this kind was perhaps made as to Mile End Old Town, and would be partly explained by the natural contrast in which the district stands to those which surround it, and which were being studied at the same time.

In St. George's East poverty and domestic crowding are each at their maximum; in the northern part, where the crowding is greatest, it is due to the presence of the Jews.

Excess of crowding in St. George's of the West is due to high rents and the presence of those who must live near their work; and in addition there are the mews in many of which large families live in a limited amount of room space, though not I think uncomfortably, over the stables of the rich.

Holborn, like St. George's-in-the-East, combines much poverty with much crowding. It is chiefly in the neighbourhood of Saffron Hill and St. Andrew's, amongst the Italians, that crowding gets the upper hand.

Chelsea includes two very different parts. In the outlying district of Kensal Town, as might be expected, the poverty is in excess of the crowding. In Chelsea proper, and especially in North Chelsea, recent clearances have tended to raise rents and crowd together those of the working classes who have not moved elsewhere, and so we find more crowding than poverty.

In Paddington I think the mews are responsible for the excess of crowding, which, however, is not very great, and indeed we now come to those districts in which the two tests give approximately the same results. In the district called officially Westminster it is St. Ann's, Soho, which shows excess of crowding. Here we have high rents and many foreigners. Elsewhere there is no excess.

Bethnal Green on the whole shows an equality of crowding and poverty, both being great. Broken up into sub-districts, we find it, like Shoreditch, more crowded than poor in its central part, the two tests giving exactly equal results in the eastern portion beyond Victoria Park.

Of the different parts of Stepney, Shadwell is the worst for crowding, but is also the poorest. It is only in Ratcliff that to any great extent we find more crowding than poverty. In Hampstead, happy Hampstead, there is neither poverty nor crowding, or at least much less than anywhere else in London. In Kensington and Islington the two percentages are throughout nearly equal.

Lambeth is very much mixed. The part near the river, Waterloo Road and Lambeth Church, is full of crowding, whereas out at Brixton and Norwood, while there is some poverty there is hardly any crowding. The one part exactly counterbalances the other. In Fulham every district gives equal results. St. Saviour's shows irregularity which, though not very great, can only be explained by error in the Poverty Classification. There were parts of this district with the returns from which I never was satisfied. On the whole, however, the two tests give almost exactly the same results.

In the City of London, Houndsditch has whatever excess of crowding is found—on the whole the balance turns towards poverty; and from now forward we have to deal with districts in which rents are lower, and where all who are not poor, and even some who are, will have reasonable space to live in. All of them have outlying districts, and with all of them it is in these districts that crowding ceases to be a necessary concomitant of poverty. As to Hackney, Stamford Hill and Stoke Newington must be set against South and West Hackney, where rents are higher. As to Woolwich, Plumstead is set against the neighbourhood of the Dockyard, where we find some excess of crowding. With St. Olave it is Rotherhithe which shows less crowding than poverty; this is an impoverished district, where even low rents are not readily collected. Poplar is fairly uniform, and nowhere in it does crowding overrun poverty. In Wandsworth, Camberwell, and Lewisham the poor are not much crowded in the outer districts, and in Greenwich, where there is a great deal of poverty and plenty of space, the divergence between the two classifications reaches its maximum.

On the whole, I think it will be admitted that the two investigations confirm each other, and rather gather strength from close comparison.

PART II.

Poverty and the Rate of Natural Increase.

It has commonly been supposed that, marriage being earlier, as well as more general among the poor, and more certain to be repeated in the cases of the widowed of both sexes, the natural rate of increase must also be greater than among the better-to-do. I am able to test this theory by a comparison of different London districts.

We have seen that poverty and crowding generally go hand-in-hand, but the connection between these two, I shall be able to show, is hardly more close than exists between either of them and the number of early marriages. The number of such marriages, again, is closely connected with the proportion which the sexes bear to each other. In the poorest districts, where women marry soonest, we find a surplus of unmarried men. In the richest districts, where women marry latest, there is a still greater surplus of unmarried women. The birth-rate on the whole is

greatest where there is a surplus of unmarried men—greater than where the sexes are most evenly balanced. All this holds reasonably well together, but the connection, which is no less marked in poor districts, between these conditions and a high death-rate depends upon other considerations. Excess of deaths counterbalances excess of births, and the result is that a high rate of natural increase does not go with poverty.

The extent to which these six conditions (Poverty, Crowding, Early Marriage, Surplus of Unmarried Men, High Birth-rate, and High Death-rate) are inter-connected can be shown in a simple way by arranging the London registration districts in order of each of these conditions in turn, from maximum to minimum, and comparing these orders.

As a test of Poverty I have used the figures of my previous work, and for Crowding those of my present inquiry. As a test of Early Marriages I have taken the proportion in each population of married women under 25. The Surplus of either sex unmarried is also taken from the census, but I have deducted soldiers in barracks from the unmarried men, and, where unmarried women predominate, I have deducted half of the estimated number of female domestic servants. These deductions are made on the ground that neither the soldiers nor all the servants are to be counted as marriageable with regard to the district in which they live. The adjustment is however very rough, and might perhaps be elaborated further. For Births I have taken a ten years' average from the figures as they are published, with an estimated adjustment in Marylebone, where the births are unduly large because of the children born in Queen Charlotte's hospital. I have not thought it necessary to take any notice of the other lying-in hospitals, viz.: the Queen's hospital in St. Giles, the City of London, Holborn, and that in York Road, Lambeth, because the women who come to these hospitals may be supposed to come principally from the immediate neighbourhood, which is not so in Marylebone. With Deaths some more difficulties arise. The mortality returns for each district are misleading because of the great number who leave their homes and die in hospitals or workhouse infirmaries. For six years past these deaths away from home have been distributed to the districts to which they should belong, but before then it was not done. I have assumed that the distribution for the whole ten years would be similar to that recorded for the six years.

The range from highest to lowest under the various conditions is very great:—

Poverty	49 per cent. to 13 per cent. (presence of the poor)
Domestic crowding	57 per cent. to 7 per cent. (presence of those who are crowded in their homes)
Young married women under 25..	254 to 104 per 10,000 population
Surplus of unmarried (15—45)	361 males to 767 females per 10,000 population
Birth-rate	40 per 1,000 to 23 per 1,000
Death-rate.....	30 " 13 "

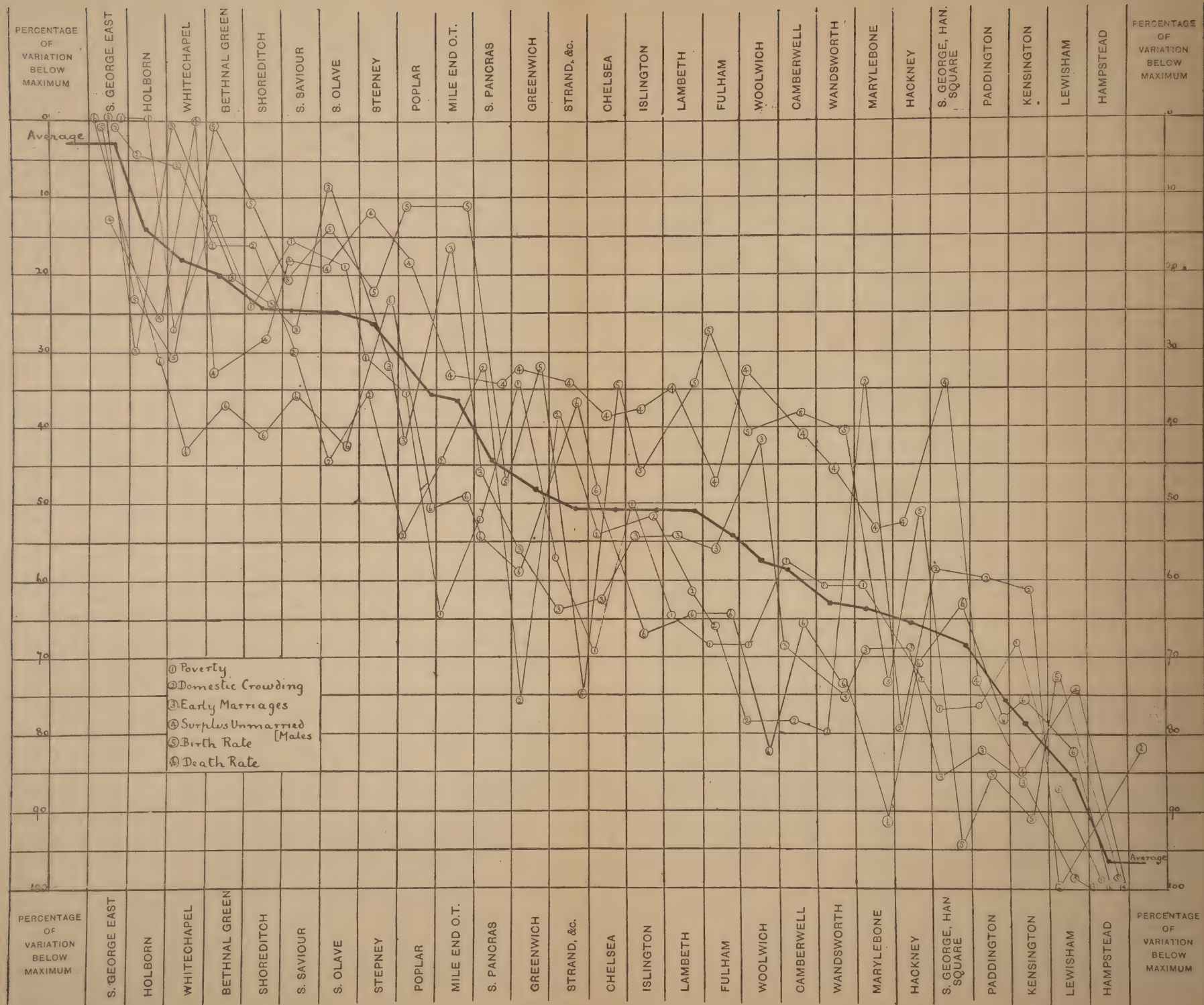
In the table which follows, twenty-seven districts appear. Of the thirty districts recognised by the Registrar-General, I have combined three, viz.: the Strand, St. Giles, and Soho (called Westminster) as being contiguous and individually small, and because I have not complete separate figures for each; and I have omitted the City of London as its population is so abnormal as to yield no results useful for comparison. In addition to the columns which represent the orders in which the districts stand according to these six tests, I have added another for the combined or mean order, and it will be seen how little this varies from any of the six, and how little on the whole they vary among themselves.

TABLE A.—*Numerical Order in which the Districts stand, tested in various ways in connection with Poverty.*

	Poverty, 49 per Cent. to 13 per Cent.	Domestic Crowding, 57 per Cent to 7 per Cent.	Young Married Females, 254 to 104 per 10,000.	Surplus Unmarried 15—45, 361 Males to 765 Females per 10,000.	Birth-Rate 40 to 23 per 1,000.	Death- Rate, 30 to 13 per 1,000.	Com- bined Order.
St. George's East.....	1*	1	1	3	1	1	1
Holborn	1*	2	8	7	9	3	2
Whitechapel	7	3	2	1	11	8*	3
Bethnal Green.....	3	5	5	12	2	6	4
Shoreditch	6	4	6	8	3	7	5
St. Saviour's.....	4	6	7	4	7	4*	6
St. Olave	5	11	3	6	6	8*	7
Stepney.....	8	9	9	2	8	2	8
Poplar	10	15	10*	5	4*	12	9
Mile End Old Town	17*	12	4	11	4*	11	10
St. Pancras	12	7	12	14	19	13	11
Greenwich	9	21	16	10	12	14	12
Strand, St. Giles, and Soho ..	14	10	18	13	23	4*	13
Chelsea	22	14	17	18	14	10	14
Islington	11	13	13	17	18	19	15
Lambeth	17*	18	14	16	13	15*	16
Fulham.....	19*	20	15	21	10	15*	17
Woolwich.....	19*	23	10*	9	16*	24*	18
Camberwell	13	22	21	19	15	18	19
Wandsworth	15*	25	22	20	16*	21	20
Marylebone	15*	8	19*	23	21	26	21
Hackney	23	24	19*	22	20	20	22
St. George's, Hanover Sq.	25	16	24	15	26	17	23
Paddington	24	17	23	24	24	23	24
Kensington	19*	19	25	26	25	22	25
Lewisham.....	26	27	26	25	22	24*	26
Hampstead	27	26	27	27	27	27	27

* Aequales.

DIAGRAM I.



It will be seen that the first eight in the mean order are also the first eight in order of poverty, and the last six are also the same in both orders, while the rest vary very little tested in this way, nor do they vary very much however they may be tested.

The exceptions are perhaps as interesting as the rule, and a diagram will be useful in studying them. The diagram (No. 1) places the districts in the mean order, as that which, on the whole, best expresses the conditions of life which are at once connected with poverty and bear upon the rate of natural increase. Each district is represented by a vertical column which is divided into 100 lines, and each line is taken to represent one hundredth part of the difference between the maximum and minimum rate, and so used that a succession of dots indicates the comparative position of each district as to poverty, crowding, &c.³

In what follows I will first pursue each line and then each column of the diagram:—

Poverty, which is equal in St. George's East and Holborn, is less marked in Whitechapel, but afterwards follows closely the average line as far as Mile End Old Town. Here it is a good deal out, and, as I suppose, to some extent wrong. There is no other discrepancy of importance as we follow the line from left to right.

The line of *Domestic crowding* diverges rather more. For instance, St. Olave on the south side suffers, as it seems, much less in proportion to its poverty than Stepney, on the opposite side of the river, which is hardly so poor; Whitechapel is more crowded than poor; Poplar, Greenwich, more poor than crowded, and in Central London and Marylebone we find again more crowding than poverty; apart from these not unreasonable exceptions the line follows very closely the mean order which crosses the paper diagonally.

Early marriages are very numerous in St. George's East and Whitechapel. In Holborn and also in St. Saviour's they are not so marked, but show again very clearly in St. Olave's and Mile End Old Town. Otherwise this line, too, follows very closely the diagonal.

Unmarried men compared to unmarried women are most in Whitechapel and Stepney. They are not found to any great extent in Bethnal Green or Shoreditch. The sexes are equal in Camberwell, and thence forward, with the exception of St. George's, Hanover Square, women increasingly prevail till we reach Hampstead, at the bottom.

The line of *Births* is that which is least regular in detail—high at St. George's East—low in Holborn and Whitechapel—high

³ See key in Appendix.

in Bethnal Green and Shoreditch, and again at Poplar and Mile End Old Town—remarkably low in Central London and Marylebone—high at Fulham, Camberwell, and Wandsworth—comparatively high at Hackney—very low in St. George's, Hanover Square—nevertheless the general tendency of the line is not different from the others.

Finally, *Deaths* yield a very regular line: starting at St. George's-in-the-East it rapidly falls, and, except at Stepney, never again rises to anything like the same level.

Turning now to the different districts it is to be noticed that:—

St. George's-in-the-East stands first in five out of the six tests, and is third in the remaining one. It can only be paired with *Hampstead* at the other end of the scale which is last in five and next to last in the remaining one. Here we have our alpha and omega, and it is somewhat remarkable that in these districts we have equally low rates of natural increase, the difference between birth-rate and death-rate being in both cases only 10 per cent.

Holborn for poverty is level with St. George's-in-the-East, and is almost on an equality as to crowding, but on all the other points it takes a better place.

Whitechapel is somewhat peculiar. Its birth-rate and death-rate are both low for its general place. It is distinctly more crowded than poor, and has the largest proportion of unmarried men, as well as almost the largest proportion of young married women. The population is however so peculiar, consisting largely of newly arrived Jews, and affected by the casual inmates of common lodging houses and night refuges, that if the results shown had been more abnormal than they are, there would have been no occasion for surprise.

Bethnal Green and Shoreditch, lying side by side geographically, are fourth and fifth for crowding, fifth and sixth for early marriages, second and third for births, and sixth and seventh for deaths. Bethnal Green is Shoreditch intensified, or Shoreditch is Bethnal Green diluted. For poor districts both have a very high rate of natural increase.

St. Saviour's and St. Olave are another somewhat similar pair, St. Saviour's is notable for a comparatively low death-rate, and St. Olave for early marriages. St. Olave compared to her poverty suffers but little from crowding. I am told that this is due, or partly due, to good local administration.

Stepney, Poplar, and Mile End may be considered together. In Stepney the lines of poverty and crowding converge. Poplar though hardly less poor is very much less crowded than Stepney, and with this has a much lower death-rate. Mile End Old Town,

which adjoins the other two, equals Poplar in its high birth-rate and low death-rate, and has fewer cases of crowding. Altogether it is undoubtedly much the least poverty stricken of East End districts, even if its position in this respect is here somewhat exaggerated.

St. Pancras is more crowded than poor, and has a low birth-rate, but on the whole takes its place in the series very well. *Greenwich* offers the single peculiarity of little crowding with considerable poverty. The place was over-built, and rooms are more plentiful than tenants.

In the *Strand*, *St. Giles*, and *Soho*, which are full of strangers and foreigners, the birth-rate is very low, and the death-rate being at the same time rather high, the lowest rate of increase is shown. In *Chelsea* a full birth-rate is more than counterbalanced by a heavy death-rate. *Islington* falls into line in its place, and calls for no remark. In *Lambeth* and at *Fulham* births are numerous, while deaths are moderate, and conditions generally satisfactory. At *Woolwich*, with but little crowding, and a low death-rate, we reach the highest point of natural increase. The large proportion of young married women and unmarried men is the most remarkable feature. For *Camberwell* and *Wandsworth* the average position on the chart is exactly the same as that shown by the order of poverty. They both have little overcrowding and a full birth-rate.

Marylebone is peculiar. It is on the whole a well-to-do and even a rich district, but in parts is wretchedly poor, and wherever it is poor it is over-crowded. The death-rate is very low, but so also is the birth-rate, and we are left with a rather small natural increase. As with *Wandsworth* and *Camberwell* the mean position is exactly that indicated by the line of poverty. Comfortable middle class *Hackney* has a higher birth-rate than the districts which are next it on our list. It is probably placed in its true position, but has little in common with its neighbours on the diagram.

In *St. George's*, *Hanover Square*, the birth-rate is exceptionally low, being in this like the *Strand* district which it adjoins, though the death-rate is not so high. Both are more crowded than poor. In neither can we consider that we have a quite normal population, for there are not only the inmates of hotels and those who serve them, but also a number of people living a non-domestic life in chambers and lodging houses, constituting altogether a large population of casual inhabitants, rich and poor. *Paddington* and *Kensington*, which follow, show little difference at any point. On the other hand *Lewisham* differs from *Hampstead* more than the numbers in the table might suggest, having many fewer single

women than Hampstead in comparison to the single men, and a higher death-rate as well as higher birth-rate. In *Hampstead* there are some of the crowded poor—rather more than in *Lewisham*—but otherwise, as we have already said, every sign of poverty is here at its minimum.

It would be interesting to carry the comparison we have been making into the sub-districts, and so deal with more concentrated specimens of each condition, but for this I have not at present the full data. That the six conditions we have been studying are closely inter-connected in London has I think been proved. That there is no prevailing connection between them and increase of population may best be shown by comparing the line of poverty and its concomitants with the line of natural increase stated in the same way. For this purpose the mean line is repeated on diagram No. 2, and the line of increase thrown across it. It will be perceived that they have nothing whatever in common.

We have seen incidentally that the rate of increase is least at the extremes of poverty and wealth. Following this clue we may trace the connection between increase and the presence of the central classes—that is those who are neither rich nor poor.

If we take the seven poorest districts, which with one exception are also the most crowded, and arrange them in proportion to the presence of this central class, we get the following list:—

	Central and Comfortable Working Class.*	Births.	Deaths.	Increase.
	Per cent.	Per cent.	Per cent.	Per cent.
Whitechapel	31	35	23	12
St. George's East	38	40	30	10
Holborn	39	36	25	11
Shoreditch	46	38	23	15
Bethnal Green	48	40	24	16
St. Saviour's	52	37	24	13
St. Olave.....	61	38	23	15

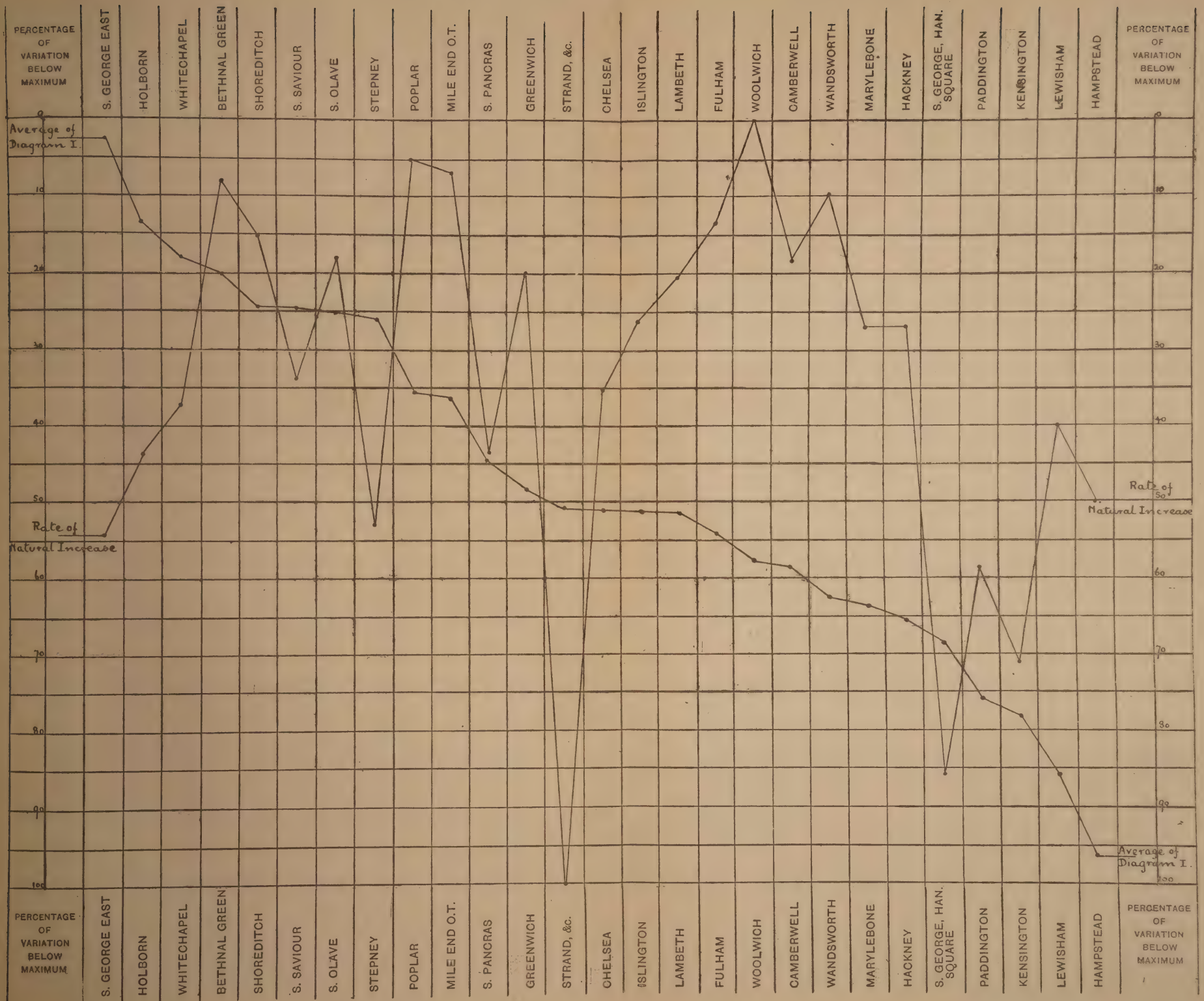
* Those living less than two to a room, or in more than four rooms without servants, or with one servant to four or more persons.

The order is not perfectly regular, but it seems pretty clear that the rate of increase on the whole follows the proportion of the central classes.

On the other hand, if we take the seven districts with the largest proportion of upper class people⁴ and arrange them similarly, only in descending order, we get the following list:—

⁴ Those who employ servants, either one servant for less than four persons served or two or more servants for any size of family.

DIAGRAM II.



	Central and Comfortable Working Class.	Births.	Deaths.	Increase.
	Per cent.	Per cent.	Per cent.	Per cent.
Hackney	69	32	18	14
Lewisham	66	28	16	12
Chelsea	53	34	22	12
Paddington	44	26	16	10
Hampstead	41	23	13	10
St. George's, Hanover Sq....	41	24	19	5
Kensington	35	25	17	8

It seems with both rich and poor that where the central class falls to 40 per cent. the rate of increase falls to 10 per cent. The still lower rate for Kensington may probably be open to special explanation. The children of the very rich are often country born, and the population is in many ways abnormal. That of St. George's, Hanover Square, is still more abnormal, and I do not regard the 5 per cent. rate there shown as really relevant to this comparison.

There remain thirteen districts in which the population is more mixed. Of these the Strand with St. Giles and Soho is so peculiar, with a rate of increase below 3 per cent., that it is best omitted. The rest may be arranged as follows:—

	Central Class, &c.	Births.	Deaths.	Increase.
	Per cent.	Per cent.	Per cent.	Per cent.
Camberwell	73	34	19	15
Greenwich	70	35	20	15
Wandsworth	67	33	17	16
Woolwich	66	33	16	17
Poplar	65	38	21	17
Fulham	62	36	20	16
Lambeth	62	35	20	15
Mile End Old Town	60	38	22	16
Islington	58	32	18	14
Stepney	54	36	26	10
St. Pancras	48	32	21	11
Marylebone	36	28	14	14

The exceptionally low death-rate of Marylebone, and the no less exceptionally high death-rate for Stepney, throw these figures out, and may perhaps be attributed to special causes. Otherwise the list supports the contention that the rate of increase is connected with the presence in large numbers of the central class. It is not in exact proportion. We cannot say positively that with one-third we have 10 or 11 per cent., and with two-thirds 15 or 16 per cent., but something of the kind is clearly suggested, and if so it must follow that the rate for either the poor or the rich if isolated

would fall considerably below 10 per cent., and that for the central class rise considerably higher than 16 per cent. In fact the rate in the centre must be more than double that of the extremes.

I do not present these conclusions as finished work; the investigation needs to be carried further, and the results turned about in many ways before one can feel confident that the truth, which I think they contain, is truly told; and I lay them thus crudely before this Society in hope of receiving critical assistance from those who know their way better than I do through the intricacies of vital statistics.

There are some further points which I may refer to, although the results so far are mainly negative. It seemed possible that the natural rate of increase might accord with the age distribution in the districts studied; that is, that migrations, causing some districts to have more and others less than their fair proportion of men and women in the vigorous years of life, might explain differences in the natural rate of increase. I however cannot find that it is so. It indeed happens that the two districts which show the largest proportions in age between 20 and 50 are actually the districts with least natural increase.

I have tried also to connect the rate of increase with the character of the prevailing industries, and for this purpose I grouped together as one class all heads of families engaged in out-door occupations; those employed in factory and workshops for another class, &c., but can make nothing of it.

It is probably necessary to break up the problem, and study birth-rate and death-rate quite separately. It is because the rate of increase is the resultant of these two, and that they are affected differently by concurrent causes or in opposite directions by the same causes, that the results are so difficult to express in the terms of any law. On the whole it seems that the causes which make for a high birth-rate make also for a high death-rate. It might be possible to show reasons for this. If the lack of care which allows young children to die, is only another form of the recklessness that without thought for their future has brought them into the world, then we might confidently expect that a reduction in infant mortality would always be accompanied by fewer births. To bring figures in support of this view we should need for our comparisons death-rates differentiated according to age, and these are not available.

A good deal more might be made out of the simple comparisons I have laid before you this evening if they were carried into smaller areas. Many of the facts can be stated equally well for the sub-districts, but not all. I have the figures for crowding in this form, and also practically for poverty, and the birth-rate is

so published; but ages and conjugal condition are not taken out for sub-districts, nor are the deaths in institutions distributed in such detail. These particulars could indeed be obtained, but only at the cost of considerable work, more perhaps than the Registrar-General would consider to be justified. If it were done, however, it would be possible not only to apply the same methods of comparison more accurately, but some others would be available. It might be possible to find districts so typical as practically to isolate this or that social or industrial condition; whereas in the larger areas there is inevitably a considerable admixture of elements, and so possibly of conflicting agencies at work.

PART III.

Specimen Groups of London Trades.

In trying to find in the census a "common measure" of social condition, my main object was the study of the terms on which life is lived in London in connection with various industries and their remuneration. The next volume of my book, in which this attempt will be made, should be published next year, and will analyse the whole population by trades or groups of trades, of which, as before stated, I make about 90. Much of the interest of the work will lie in the comparisons to be made between trade and trade, but for such comparisons I have to wait till every section is finished. All I can do at present is to submit individual samples.

I have chosen as specimens of this work two groups of trades, the first of which is that connected with the manufacture of chemicals. Included in it are dye, paint, and blacking manufacture, and the making of matches and explosives. The census counts in all 5,836 persons engaged in these trades, and of these 2,285 were heads of families. Pursuing these heads of families, we find that, with the other members of their households (however occupied, or whether occupied or not), we reach a total population of 10,892.

Each trade in turn is subjected to this dual method of enumeration. The census counts everyone, young or old, according to their trades, and completes the tale of the population by a large "unoccupied" class, consisting chiefly of women and children. The special social enumeration, on the other hand, counts only the heads of families by their trades, and adds to them, as living under the same conditions, and connected to that extent with each trade,

all the members of their households. The census enumeration classifies the people according to their work. The social enumeration classifies them according to the character of the home in which they live, and connects this with the industrial position of the head of the family. Both methods are useful, and for every trade I put the results side by side as follows:—

Section 1. Chemicals, &c. Persons Represented.

(A.)

(B.)

Census Enumeration.						Enumeration by Families.						
		Females.	Males.			Total.	<div>Heads of families { Male 2,094 Female 191 Born in London ... 1,379 " out of London 906 } 2,285 Employer 328 Employed 1,847 Neither 110</div>					
		All Ages.	—19.	20—54.	55—							
(1) Manufacturing chemist.....		741	207	1,158	227	2,333						
(2) Dye, paint, blacking, &c.		105	218	929	139	1,391						
(3) Gunpowder, matches, &c.		1,183	495	393	41	2,112						
Total.....		2,029	920	2,480	407	5,836						
Details of Occupation.												
(1) Cod liver oil manufacturer, perfumer, insect powder, benzoline, tar, essential oil distiller, anti-fouling composition, disinfectant manufacturer, baking powder, starch manufacturer, drysalter												
(2) Dyewood worker, aniline dye manufacturer, colour grinder, artist's colourman, white lead maker, black lead grinder, lampblack maker, writing, marking, and printing ink makers, ink bottle filler, corker, label cutter, labeller												
(3) Fog signal, fuze, torpedo, rocket maker, percussion cap, pyrotechnist, match maker												
Classification.												
Lower Class.			Central Class	Upper Class.		Servants.	Total.					
(1 and 2.)	(3.)	(4.)	(5, 6, and a.)	(b.)	(c, &c.)							
1,116	2,074	2,589	3,672	450	421	570	10,892					
Per ct. 10'2	Per ct. 19'1	Per ct. 23'8	Per ct. 33'7	P. ct. 4'1	P. ct. 3'9	P. ct. 5'2	Per cent. 100					
Distribution.												
E.	N.	W.	Central.	S.E.	S.W.	Total.						
3,612	1,923	467	570	2,460	1,860	10,892						
Proportion of employers to employed—1 to 13												

With enumeration (A) I shall not now deal at all; it is a mere re-statement of the figures published in the census, somewhat simplified and condensed for ready reference.

As to enumeration (B), it will be seen that the heads of families are divided—male or female, born in or out of London, and employer or employed; and that from these heads of families, by addition of the other members, occupied, unoccupied, and servants, is built up the total population involved. This population is then classified according to rooms occupied, &c., and note taken of its distribution in various parts of London. When the work is complete, I hope to be able to say, as to each district, of what size a “room” usually is, and its probable rent. All the figures given are reduced to percentages, and by them it will be possible to compare one occupation with another, and the lot of those engaged in any trade with the scale of remuneration found in it.

To find out what is truly the scale of pay in any trade I address the employers in it, asking such of them as are willing to help me to make a return, on a form which I provide, of the numbers working in any average week (or if possible two weeks representing busy and slack times), with the various wages actually earned. Some employers decline to do this, but many are most kind, and not a few have volunteered the fullest possible details, of which I trust I may be able to make good use. I have also sought out the ‘Trades’ Union officials wherever such organisation exists, and have obtained from them and from individual workers further evidence on this subject, as well as on regularity or irregularity of work, hours of labour, &c.

For the group of chemical trades I have obtained particulars of wages paid in representative weeks by fifteen firms, employing 800 to 900 men, women, and boys, and two of these firms have stated busy and slack weeks separately. With these returns I have been kindly permitted to compare those made to the Board of Trade in 1886 by eleven firms, employing nearly 500 people. The table which follows gives the information thus collected. In it women are omitted, as it is with those who are or may be heads of families that we are first concerned. The twenty-six firms are apportioned as follows amongst the various branches of the work:—

<i>Our Returns.</i>		<i>Board of Trade Returns.</i>	
Chemical manufacturers	7	White lead and paint works....	8
Paint and colour works.....	2	Varnish and Japan works	2
Ink makers	2	Ink maker	1
Blacking manufacturer	1		—
Dye maker	1		11
Match makers.....	2		—
	15		

Men Employed in the Chemical Trades.

Earnings.		Our Returns (Average Earnings, 1893).					Board of Trade Returns (Full Week's Work, 1886).				
One Week.		Gross Number.	Deducted as belonging to other Sections.		Net Number.	Per Cent.	Gross Number.	Deducted as belonging to other Sections.		Net Number.	Per Cent.
Below 20s.	66	Labourers Packers	50	16	4'0	11	Labourers Packers	1	10	4'5	
20s. and under 25s.	105										
25s. „ 30s.	128	Carmen Watchmen...	40	65	16'1	122	Carmen Watchmen...	46	76	33'6	
30s. „ 35s.	153										
35s. „ 40s.	116	Coopers Enginemenn ..	60	68	16'9	97	Coopers Enginemenn ..	39	58	25'7	
40s. „ 45s.	51										
45s. „ 50s.	18	Blacksmiths. Carpenters....	50	103	25'6	79	Blacksmiths. Carpenters...	21	58	25'7	
50s. and upwards	26										
		and others....	60	56	13'9	38	and others....	32	6	2'6	
		—	—	51	12'6	6	—	—	6	2'6	
		—	—	18	4'4	2	—	—	2	0'8	
		—	—	26	6'5	10	—	—	10	4'5	
	663	—	260	403	100'0	365	—	139	226	100'0	

It will be seen that in the above table those who would be returned in the census as belonging to other sections of employment are deducted.

In comparing these returns, we have to make some allowance, because our figures represent actual earnings made in the weeks chosen, including short time or over time, whereas those of the Board of Trade are for an ordinary full week's work. The 66 men in our returns taking less than 20s. will have mostly had short time, and accordingly we do not find their equivalent in the Board of Trade figures; on the other hand, the men in our return who receive 35s. to 45s. may have worked seventy or eighty hours at the mills, or may have been on piece work. The comparatively large proportion in the Board of Trade Returns at 20s. to 25s. is due to the fact that these returns are mostly from white lead or paint and colour works, whereas ours are mostly from chemical works. It is also probable that wages are somewhat higher all round now than they were in 1886. These allowances made, the two returns confirm each other, and omitting all employed who belong to other sections, we may say that these trades afford in ordinary times about the following scale of remuneration:—

Under 20s.	5 per cent.
20s. and under 25s.	25 „
25s. „ 30s.	20 „
30s. „ 35s.	25 „
35s. „ 45s.	15 „
45s. and upwards.....	10 „
	100 „

The number of heads of families in these trades does not differ very much from that of adult males in the active years of life. A comparison may be made between the foregoing probable scale of remuneration, and the style in which these men appear to live. Deducting the 300 employers and their families, who may count up to 1,500 persons, and assuming that they all live in better style than their workpeople, or than those in the trade who employ no one, we may classify the non-employing classes as follows:—

Lower class	{	(1 & 2.) Those living 3 or more in each room....	1,116 or 13 per cent.
		(3.) " 2 to 3 " 	2,074 " 23½ "
		(4.) " 1 " 2 " 	2,589 " 29 "
Central class	{	" less than 1 "	3,043 " 34½ "
		" in more than 4 rooms, without servants	
		Those employing 1 servant for 4 or more persons	

In attempting to compare the table of remuneration with the table of classes, it must be remembered that the former includes no one who is entirely out of work. For instance, there are the sick, a consideration which applies especially to unhealthy trades; then there may be some of the old who, though no longer working, return themselves as still belonging to the trade; and there are others who from various causes are only nominal workers, and yet may be heads of families belonging to this trade in the census enumeration. If then from the 13 per cent. in the one table, being those who with their families are living three or more to a room, we deduct the broken down, &c., the remainder may be balanced by the 5 per cent. of those whose short time yields them less than 20s. in any week. This done, the other figures compare reasonably enough. The families of men earning 20s. to 24s. live two or up to three persons to a room; those of men earning 25s. to 29s., and some of those at 30s., live one or up to two persons per room; while those making over 30s. either occupy more than four rooms or have less than one person in each room.

There are three classes of workmen employed in chemical works, viz.: foremen, chemical labourers, and yardmen; of these the last are ordinary labourers, and most likely are returned under that heading in the census. Their position is, however, very similar to that of the lower grades who would be returned as employed in paint and colour works. Foremen get 40s. to 50s., and "leading hands" make from 30s. upwards, being paid 6d. or 7d. an hour for rather full time. Chemical labourers are paid 5d. to 6d. (usually 6d.) an hour, or about 25s. for an ordinary week; but they, as well as the leading hands, make a good deal of overtime. The most unhealthy processes of white lead making

are paid 7s. 6d. a day, but the men do not work at this more than three days a week. Others employed get 4s. 6d. a day, or 19s. to 22s. a week for such as have regular work.

Such are the rates of pay. The plan of noting actual wages on average weeks should approximate to a statement of actual average earnings, but in most cases will fall short of this; 20s. to 24s. per week may not, taking one man with another, yield a larger income than 45*l.* to 55*l.*, nor 25s. to 29s. more perhaps than 60*l.* to 70*l.* per annum, for all cannot be regularly employed. I know of no way in which to arrive at any very certain estimate of annual earnings for the rank and file of daily wage men. They depend on two very slippery factors, viz., the degree of irregularity in the work offering, and the numbers of those who compete for it. As to the chemical trades, however, I can say that the work is very fairly regular, and is in the hands of a body of regular employees, who may probably more than make up in over-time when trade is active the wages they lose when work is slack.

In considering these incomes it is to be remembered that we deal with average families. At the same wages a man with a small dependent family will take a better place in the scale of crowding than one who has many to support. On the average the head of each family has two and a half persons to support besides himself, and in each family there is on the average one other occupied member. These other occupied persons may be supposed to pay for board and lodging and keep themselves, and some may have money to spare; but if so they spend it or save it for themselves; they may be, and in this case probably to a great extent are, employed in the same group of trades, and if so are remunerated as follows:—

Remuneration of Females and Boys in Chemical Trades.

	Our Returns.	
	Females.	Boys and Lads.
5s. or less	5	3
6s.	14	1
7s.	20	—
8s.	20	—
9s. to 10s.	29	11
11s. to 12s.	9	7
13s., 14s., and 15s.	9	11
16s. to 20s.	4	17
Over 20s.	2	—

Note.—The Board of Trade Returns include a large number of female lead workers paid 12s. a week, and others paid 14s. and up to 15s. 6d. These are a very low class of women, and are not represented at all in our returns.

These figures speak clearly enough for themselves. There will follow in the book on which I am engaged a general description of the working of these trades; the regularity and irregularity of the employment offered, the degree of skill involved, and the methods of training, and of the trades unions or other organisations of the masters or men; but with all this it is unnecessary to deal now.

The other Section to which I will refer consists of soap and candle makers, and with them are grouped the makers of glue and size. In all, the census counts 2,195, of whom 1,056 are heads of families; these with their households counting up to a total of 4,946. The complete details are as follows:—

Section 2. Soap, Candles, Glue, &c. Persons Represented.

(A.)

(B.)

Census Enumeration.					
	Females.	Males.			Total.
	All Ages.	—19.	20—54.	55—	
(1) Tallow, soap, &c.	139	245	849	153	1,386
(2) Glue, size, manure, &c.	223	128	332	61	744
Total.....	362	373	1,181	214	2,130

Enumeration by Families.					
Heads of families	Male	1,003	}	1,056	
	Female	53			
	Born in London	664			
	„ out of London	392			
	Employers	129			
	Employed	856			
	Neither.....	71			

Heads.	Others Occupied.	Unoccupied.	Servants.	Total.
1,056	1,037	2,646	207	4,946
or per family :				
1'0	0'98	2'51	0'20	4'69

Details of Occupation.					
(1.) Grease collecting, tallow rendering, stearine making, glycerine preparation (crude and refined), cart grease, railway grease, neat's foot oil making; wax tapers, night light making, dog cake maker.					
(2.) Gelatine capsule maker, isinglass maker, roller; paste maker; bone boiler, calciner, crusher, miller, gatherer.					

Classification.							
Lower Class.			Central Class	Upper Class.		Ser- vants	Total.
(1 and 2.)	(3.)	(4.)	(5, 6, and a.)	(b.)	(c, &c.)		
435	980	1,179	1,833	183	129	207	4,946
Per ct. 8'8	P. ct. 19'8	Per ct. 23'8	Per ct. 37'1	P. ct. 3'7	P. ct. 2'6	Per cnt. 4'2	Per ct. 100

Employer.	Employed.	Neither.	Total.
172	1,923	100	2,195

Distribution.						
E.	N.	W.	Central.	S.E.	S.W.	Total.
1,459	424	202	242	1,054	1,565	4,946

Proportion of employers to employed—I to 11					
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Census Enumeration.

Enumeration by Families.

	Females.	Males.			Total.
	All Ages.	—19.	20—54.	55—	
(1) Tallow, soap, &c.	139	245	849	153	1,386
(2) Glue, size, manure, &c.	223	128	332	61	744
Total.....	362	373	1,181	214	2,130

Heads of families	Male	1,003
	Female	53
Born in London	664	1,056
	,, out of London	392
Employers	129	856
Employed	856	
Neither	71	

Details of Occupation.

- (1.) Grease collecting, tallow rendering, stearine making, glycerine preparation (crude and refined), cart grease, railway grease, neat's foot oil making; wax tapers, night light making, dog cake maker.
- (2.) Gelatine capsule maker, isinglass maker, roller; paste maker; bone boiler, calciner, crusher, miller, gatherer.

Classification.

Lower Class.			Central Class	Upper Class.		Servants	Total.
(1 and 2.)	(3.)	(4.)	(5, 6, and a.)	(b.)	(c, &c.)		
435	980	1,179	1,833	183	129	207	4,946
Per ct. 8'8	P. ct. 19'8	Per ct. 23'8	Per ct. 37'1	P. ct. 3'7	P. ct. 2'6	Per cent. 4'2	Per ct. 100

Distribution.

E.	N.	W.	Central.	S.E.	S.W.	Total.
1,459	424	202	242	1,054	1,565	4,946

Proportion of employers to employed—1 to 11

For these people we have very full information as to wages. Our particulars are from fourteen firms, who employ 1,500 to 1,600 persons all told, and six or seven of the largest employers have not only returned for busy and slack weeks, but have supplied the fullest possible details that their wages books afford. The Board of Trade returns of 1886 are from eighteen firms, employing 900 persons:—

<i>Our Returns.</i>		<i>Board of Trade Returns.</i>	
Soap makers	4	Soap makers	11
Soap and candle makers	3		
Glue and size makers	2	Perfumery makers.....	4
Gelatine makers	2		
Tallow melters and bone crushers	2	Candle makers	2
Dog cake maker	1	Tallow melter	1
	—		—
	14		18
	—		—

The average earnings shown are as follows:—

Men Employed in the Manufacture of Soap, Candles, Glue, &c.

Earnings.		Our Returns (Average Earnings), 1893.				Board of Trade Returns (Full Weeks' Work), 1886.				
One Week.	Gross Num- ber.	Belonging to other Sections.		Net Num- ber.	Per Cent.	Gross Num- ber.	Belonging to other Sections.		Net Num- ber.	Per Cent.
	Men.									
Below 20s.	133	Watchmen..	12	121	9'6	18	Carmen	6	12	5'3
20s. and under 25s.	374	Carmen					Stokers			
		Seed	82	292	22'9	137	Coopers	17	120	32'8
		crushers..					Engine			
25s. „ 30s.	429	Oil millers..					drivers ...			
		Case makers }					Wheel-			
30s. „ 35s.	261	Coopers	117	312	24'4	251	wrights	68	183	50'0
		Engine					Carpenters..			
		drivers	54	207	16'2	29	Engineers ...	12	17	4'6
		Carpenters..								
		Engineers ... }								
35s. „ 40s.	186	—	20	166	13'0	29	—	4	25	6'9
40s. „ 45s.	93	—	11	82	6'5	16	—	13	3	0'8
45s. „ 50s.	50	—	8	42	3'2	2	—	2	—	—
50s. and upwards	59	—	5	54	4'2	10	—	4	6	1'6
	1,585	—	309	1,276	100	492	—	126	366	100

We have here nearly as many men as are returned in the census. Some others, however, there must be in addition to those of whom we have information. It may be that some of our men appear under another section in the census, for instance, under “labour undefined,” or “factory hand;” or it may be that some of them live beyond the boundaries of the Registrar-General's London.

The Board of Trade wages are on the whole lower than ours; there has no doubt been some rise since 1886. The greater proportion on our list below 20s. is again due to the fact that our returns

give actual money earned, and the Board of Trade returns full weeks' wages.

As to the difference between busy and slack weeks we find :—

Men, Women, and Boys.

	Numbers in Slack as Compared with Busy Weeks.	Average Earnings, Comparing Slack with Busy Weeks.	Date of Slack Weeks.	Date of Busy Weeks.
Our returns	2,255 to 2,493 or 90·5 p.ct.	20/2 to 22/2	June (3), Dec., Jan.	Feb., April, May, June, Dec.
Board of Trade	797 „ 888 „ 89·8 „	22/1 „ 24/3	June, April, Nov., Dec.	Jan., Feb., April, July.

It is to be noted that the variation as between busy and slack weeks is only 10 per cent., and that both returns agree as to this. It seems that the busy and slack weeks fall rather irregularly. The 10 per cent. reduction in numbers employed is further accentuated by an additional 10 per cent. reduction in the average earned. This average is not confined to men or to those strictly belonging to this trade, and is inserted merely to show to what extent slack work affects wages as well as numbers. The low average which our figures yield compared to those of the Board of Trade, seems to be accounted for by the employment of a larger number of girls or boys now than in 1886, the percentage of boys to the total number employed being considerably greater in our returns than in those of the Board of Trade.

From the six detailed returns we are able to make the following comparison between time work and piece work in slack and busy weeks; the men enumerated are only those employed in these factories who would be returned in the census as occupied in making soap, candles, glue, &c. :—

Men.	Busy Week.				Slack Week.				Total Average.			
	Men.	Wages.	Hours.	Rate.	Men.	Wages.	Hours.	Rate.	Men.	Wages.	Hours.	Rate.
<i>Time work.</i>												
Under 5d. per hour	141	22 5	63½	4¾	110	20 8	59½	4	150	21 8	61½	4¼
5d. to 6d. „	145	31 2	69¾	5¼	133	27 5	60¾	5¼	180	28 10	65	5¼
Over 6d. and under } 8d. per hour	43	34 2	61½	6½	33	35 1	65¼	6¼	43	34 8	63¼	6½
Over 8d. per hour	16	58 7	68½	10¼	16	48 6	56¾	9¼	16	55 —	63	10
	345	—	—	—	292	—	—	—	389	—	—	—
<i>Piece work.</i>												
Under 15s.	20	10 6	—	—	41	11 4	—	—	31	11 —	—	—
„ 20s.	33	17 3	—	—	30	17 —	—	—	34	17 1	—	—
„ 25s.	33	23 2	—	—	54	23 5	—	—	47	23 4	—	—
„ 30s.	30	27 5	—	—	104	26 11	—	—	70	27 —	—	—
„ 40s.	127	35 2	—	—	60	34 —	—	—	110	34 10	—	—
40s. and upwards.....	106	45 4	—	—	20	50 3	—	—	68	46 —	—	—
	349	—	—	—	309	—	—	—	360	—	—	—

It will be seen that the difference shown here between busy and slack weeks is 13 per cent.

Time workers and piece workers are nearly equal in numbers. The effect of slackness is, as might perhaps be expected, greatest on the *numbers* of time workers, and on the *money earned* as regards the piece workers, though the time workers also earn less, and the piece workers are also fewer in numbers. In the busy weeks two-thirds of the piece workers received over 30s., and one-fourth over 40s., while in the slack weeks the proportion was reversed, two-thirds receiving less than 30s., and one-fourth less than 20s. We may perhaps assume that it is those who earn least in busy times who earn nothing when work is slack. Amongst the time workers this is evident; of those under 5*d.* an hour one-fifth drop out altogether, and of those earning 5*d.* to 6*d.* only one-tenth. Of those earning over 8*d.* an hour none are discharged. The exceptional reduction in the numbers of those earning 7*d.* per hour may perhaps be partly due to some of them being put to other work, for it is remarkable that those who still work at this figure actually worked more hours—65½ in the slack as compared to 61½ in the busy weeks; whereas the rest worked much shorter time in the slack weeks, those paid over 8*d.* 12 hours less, those paid 5*d.* to 6*d.* 9 hours less, and those paid under 5*d.* 4 hours less. Even in a slack week a little overtime is worked in these trades.

The hours of piece workers may to some extent be gauged by some of the returns, which gave the time worked also:—

Piece workers (men), earning—

Under 15s. for				57 hours, or 2¼ <i>d.</i> per hour.
15s. and under 20s. for	56	„	3¾ <i>d.</i>	„
20s. „ 25s. „	57	„	5 <i>d.</i>	„
25s. „ 30s. „	55	„	5¾ <i>d.</i>	„
30s. „ 40s. „	62	„	7 <i>d.</i>	„
40s. and upwards....	65	„	9 <i>d.</i>	„

At piece work, in busy times, men work long hours and fast, so earning the maximum rate per hour. In slack times they spin the work out—the time worked is rather less and the money earned per hour very much so.

The pay of those who are not heads of families, is as under:—

Earnings.	Women and Girls.					Lads and Boys.					
Per Week.	Gross Number.	Belonging to other Sections.		Net Number.	Per Cent.	Gross Number.	Belonging to other Sections.		Net Number.	Per Cent.	
5s. or less	9	Fancy box making	7	2	2'5	31	Van and stable boys, seed crushing, oil refining	2	29	4'0	
6s.	14		10	4	5'0	83		2	81	11'3	
7s.	31		25	6	7'5	98		5	93	13'0	
8s.	25		22	3	3'7	106		23	83	11'6	
9s.—10s.	62		48	14	17'5	165		40	125	17'4	
11s.—12s.	58		42	16	20'0	115		16	99	13'8	
13s., 14s., 15s.	59		37	22	27'5	119		2	117	16'3	
—20s.	25		15	10	12'5	101		21	80	11'2	
Over 20s.	5		2	3	3'8	11		1	10	1'4	
	288		208	80	100'0			829	112	717	100'0

Of the women and girls the greater proportion belong to other trades, being employed chiefly on fancy box making. Those who are counted in the section are occupied in wrapping, packing, &c., and in the making of night lights and tapers.

Boys are to be found in all sections, but are especially employed in the packing. They also make night lights, &c.

It is difficult to assign a different rate of pay or different earnings in different departments. The men may be classed in each department as:—

Time Work.

- (1.) Unskilled men earning 20s. to 25s.
- (2.) First class labourers, *i.e.*, those whose work, while requiring no actual skill, yet necessitates a certain use of intelligence and judgment, 25s. to 30s.
- (3.) Skilled, *i.e.*, the foreman and leading hands in each department, earning over 30s.

Piece Work.

- (1.) Slow workers, 20s. to 30s.
- (2.) Medium „ 30s. „ 40s.
- (3.) Quick „ 40s., upwards.

On the whole, the scale of remuneration for adult males in this section may be estimated to be as follows:—

Under 20s.	10 per cent.
20s. and under 25s.	22 „
25s. „ 30s.	25 „
30s. „ 35s.	16 „
35s. „ 45s.	20 „
45s. and upwards.....	7 „

100

And this scale may be compared with the style in which these

men and their families live, as follows (deducting 900 for employers and their families):—

Lower class	{ (1 and 2.)	435	or 12	per cent.
	(3.)	980	„ 25	„
	(4.)	1,179	„ 31	„
Central class		1,245	„ 32	„
		<hr/> 100 <hr/>		

It is again those with 30s. and upwards who belong to the central class.

Conclusion.

I perhaps exaggerate the value of the statistical instrument some of whose uses have just been exemplified. The plan of recording in connection with census enumeration some simple facts by which the position and manner of life of each family could be measured, seems to me to render possible comparisons of great social interest, and to open up a large field of inquiry into the actual structure of society. The facts which I have used to classify the inhabitants of London could be applied to any city—to Paris or Moscow, New York or Melbourne, Calcutta or Hong Kong; and for the matter of that would have served equally well in ancient Rome or Babylon. Wherever a census can be taken at all, the particulars of rooms occupied by poor families, or of servants employed in rich families, could be obtained just as easily as the particulars of numbers or sex, and far more easily and more correctly than those of age and conjugal condition.

A “room” is no doubt a vague term, but if not for the whole of the poorer classes in any city, at least for the poor of any selected district, some common type of house is to be found, and an average usual size of room prevails so generally that the accurate description of one or two specimens will speak for all, and by providing a keynote, make trustworthy comparisons practicable.

Similarly, there are servants and servants; many varieties exist in London, and the keeping of servants provides a very different measure in the extreme examples of New York and Calcutta; but all this can without difficulty be taken into account and allowed for. It would thus be possible to compare one country or one civilisation with another; as well as trade with trade, district with district, and town with town, in the same country. I do not mean that the suggested method as now crudely laid before you could do all this. It would need to be improved and perfected by alterations and additions specially adapted to whatever object was in view.

The comparisons to be made will always be of a general character as between country and country, and more minute as between different places in the same country or different sections

of the same town, but in all of them the intensive method of investigation should go hand in hand with the extensive. Without a full comprehension of unexpressed details, general statements are always lifeless, and often misleading; without some trustworthy generalisation—some ground plan of classification, by which, as in the drawers of a mineralogist's cabinet, details can be classified and seen in their proper place—elaboration is partly thrown away.

For instance, only when we know the manner of life of the people employed in any particular trade, and the scale of earnings which in any selected district is usually connected with such a style of life, can we enjoy the full benefit of such work as that of Mons. Le Play and his followers. Without such general knowledge we cannot tell whether the example given is truly typical or in what respects it diverges from a true type.

It is rather to town than country life that the number of rooms occupied applies as a "common measure." Even in towns we require the help of a wide average to go safely, for in individual cases a great variety of condition would be found with an equal degree of crowding. But even with the aid of the widest average, country life would to a great extent evade this test, for amongst the poor in country places the condition of the cottage home goes for far more than its size. If, however, we cannot obtain for agricultural populations any social measure out of the census it is not of so much consequence.

It is in town, and not in country, that "*terra incognita*" needs to be written on our social maps. In the country the machinery of human life is plainly to be seen and easily recognised; personal relations bind the whole together. The equipoise on which existing order rests, whether satisfactory or not, is palpable and evident. It is far otherwise with cities, where as to these questions we live in darkness, with doubting hearts and ignorant unnecessary fears, or place our trust with rather dangerous confidence in the teachings of empiric economic law.

Believing as I do that it is of high importance to avoid such misapprehensions, I have ventured to direct your attention to-night to the working of an instrument designed to be used in the careful examination of our existing social balance. It is, I think, a good instrument, though by no means an exhaustive one. Many such could be constructed. What I hope is that this one may be sufficiently interesting to tempt and rouse the ingenuity of inquirers to the invention of further tests touching other springs and opening wider vistas: comparing, checking, correcting, each by each, till we win firm ground, and reduce the possibilities of error to a minimum.

APPENDIX.

Key to Diagram I.

Average Order of Poverty, Domestic Crowding, Unmarried Males and Females, Young Married Females, Birth-rate, Death-rate.	Popula- tion.	Poverty.			Domestic Crowding.			Surplus of Unmarried Males or Females.		
		Or- der.	Per Cent.	Per- centage of Difference between Highest and Lowest Rates.	Or- der.	Per Cent.	Per- centage of Difference between Highest and Lowest Rates.	Or- der.	Per 10,000.	Per- centage of Difference between Highest and Lowest Rates.
1. St. George's East	45,795	2	48·9	—	1	57	—	3	361	13·7
2. Holborn	141,920	1	48·9	—	2	55	4	7	204	25·7
3. Whitechapel	74,462	7	39·2	27·4	3	54	6	1	540	—
4. Bethnal Green	129,132	3	44·6	12·1	4	49	16	12	107	33·1
5. Shoreditch	124,007	6	40·2	24·6	5	49	16	8	169	28·4
6. St. Saviour	202,693	4	43·4	15·6	6	42	30	4	310	17·6
7. St. Olave	136,660	5	42·2	18·9	12	35	44	6	281	19·8
8. Stepney	57,376	8	38·0	30·8	9	39	36	2	380	12·2
9. Poplar	166,748	10	36·5	35·1	14	30	54	5	299	18·4
10. Mile End O. T.	107,592	17	26·1	64·5	11	35	44	11	111	32·8
11. St. Pancras	234,379	12	30·4	52·4	7	41	32	14	87	34·6
12. Greenwich	165,413	9	36·8	34·2	21	19	76	10	114	32·6
13. Strand, &c.	104,610	14	28·5	57·7	10	38	38	13	88	34·6
14. Chelsea	96,253	22	24·5	69·0	15	30	54	18	41	38·1
15. Islington	319,143	11	31·2	50·1	13	31	52	17	49	37·5
16. Lambeth	275,203	18	26·1	64·5	18	26	62	16	83	35·0
17. Fulham	188,878	20	24·7	68·5	20	24	66	21	71*	46·9
18. Woolwich	107,324	19	24·7	68·5	23	18	78	9	115	32·5
19. Camberwell	235,344	13	28·6	57·5	22	18	78	19	3	41·0
20. Wandsworth	307,400	15	27·4	60·8	25	17	80	20	54*	45·4
21. Marylebone	142,404	16	27·4	60·8	8	40	34	23	150*	52·9
22. Hackney	229,542	23	23·1	73·0	24	18	78	22	148*	52·6
23. St. George, H. Sq.	134,138	25	21·6	77·1	16	28	58	15	86	34·7
24. Paddington	117,846	24	21·7	76·9	17	27	60	24	414*	73·2
25. Kensington	166,308	21	24·7	68·5	19	26	62	26	572*	85·3
26. Lewisham	94,335	26	18·1	87·0	27	7	100	25	432*	74·4
27. Hampstead	68,416	27	13·5	100·0	26	16	82	27	767*	100·0
City	—	—	31·5	—	—	27	—	—	325	—

* Excess of females.

APPENDIX.

Key to Diagram I.

Young Married Females.			Birth-Rate.			Death-Rate.			Rate of Natural Increase.			Central and Comfortable Working Class.	
Order.	Per 10,000.	Percentage of Difference between Highest and Lowest Rates.	Order.	Per 1,000.	Percentage of Difference between Highest and Lowest Rates.	Order.	Per 1,000.	Percentage of Difference between Highest and Lowest Rates.	Order.	Per 1,000.	Percentage of Difference between Highest and Lowest Rates.	Order.	Per Cent.
1	254	—	1	40·2	—	1	30·2	—	23	10·0	54·5	24	37·3
8	209	30·0	9	36·2	23·8	3	24·7	31·4	20	11·5	44·0	22	38·5
2	242	0·8	11	35·1	30·4	9	22·7	42·9	17	12·4	37·5	27	31·1
5	223	20·7	2	40·1	0·6	6	23·7	37·2	4	16·4	8·5	17	47·5
6	217	24·7	3	38·4	10·7	7	22·9	41·7	7	15·5	15·0	18	46·5
7	213	27·4	7	36·7	20·8	4	23·8	36·6	15	12·9	34·0	15	51·7
3	240	9·3	6	37·8	14·3	8	22·7	42·9	8	15·1	18·0	10	60·5
9	206	32·0	8	36·4	22·6	2	26·2	22·9	22	10·2	53·0	13	54·4
10	191	42·0	4	38·3	11·3	12	21·4	50·3	2	16·9	5·0	7	65·3
4	229	16·7	5	38·3	11·3	11	21·6	49·2	3	16·7	6·5	11	59·7
12	185	46·0	19	32·2	47·6	13	20·6	54·8	19	11·6	43·0	16	48·0
16	170	56·0	12	34·8	32·2	14	20·0	58·3	10	14·8	20·0	2	70·2
18	159	63·3	23	27·5	75·5	5	23·8	36·6	27	3·7	100·0	23	37·7
17	160	62·7	14	34·4	34·5	10	21·7	48·6	16	12·7	35·5	14	52·6
13	173	54·0	18	32·4	46·4	19	18·5	67·0	12	13·9	26·5	12	58·1
14	172	54·7	13	34·5	34·0	15	19·8	59·9	11	14·7	21·0	9	62·4
15	171	55·4	10	35·6	27·4	16	19·8	59·9	6	15·8	13·0	8	63·3
11	191	42·0	17	33·4	40·5	24	15·8	82·4	1	17·6	—	6	66·4
21	151	68·7	15	33·8	38·1	18	18·8	65·2	9	15·0	18·5	1	72·5
22	141	75·4	16	33·4	40·5	21	17·2	74·3	5	16·2	10·0	4	67·1
19	152	68·0	21	28·0	73·9	26	14·2	91·5	14	13·8	27·0	25	35·8
20	152	68·0	20	31·6	51·2	20	17·8	71·0	13	13·8	27·0	3	69·3
24	126	85·5	26	24·4	94·0	17	19·1	63·5	26	5·1	85·5	20	41·1
23	131	82·0	24	25·8	85·8	23	16·5	78·4	24	9·3	59·5	19	44·1
25	124	86·7	25	24·8	91·7	22	17·0	75·5	25	7·8	70·5	26	35·6
26	105	99·5	22	27·8	72·6	25	15·8	82·4	18	12·0	40·0	5	66·7
27	104	100·0	27	23·4	100·0	27	12·7	100·0	21	10·7	49·5	21	40·4
—	—	—	—	19·4	—	—	22·1	—	—	2·7†	—	—	44·7

† Decrease.

PROCEEDINGS *on the* 21st NOVEMBER, 1893.

AFTER the formal business of the meeting,

The Chairman, Dr. Robert Giffen, C.B., LL.D., F.R.S., announced that the Howard Medal offered, together with 20*l.*, for the best essay on "Perils and Protection of Infant Life," had been awarded to Dr. Hugh R. Jones, M.A., M.D., Honorary Assistant Surgeon to the Infirmary for Children, Liverpool.

The Medal, together with 20*l.*, was then presented to Dr. H. R. Jones.

The CHAIRMAN said he must express the regret, which all present must feel, that Mr. Booth, after preparing the opening address, was unfortunately unable to be present to deliver it himself, owing to an attack of influenza. They would all hope that it would be only a mild attack, and that in a short time he would be restored to health and strength. In his absence his Private Secretary, Mr. Jesse Argyle, would be good enough, at Mr. Booth's request, to read the Address.

The President's Address was then read by Mr. Argyle.

Dr. G. B. LONGSTAFF said he was sure all present would agree in two things: firstly, in expressing their great regret that the President was not there to deliver his Address. They were all greatly losers by his absence. No doubt he himself regretted it even more than they did, because when a man had gone through the amount of labour that Mr. Booth must have done to prepare such a work, it was a great disappointment not to be able to put it forth in his own way before the members of the Society. Secondly, they would also agree in passing a very cordial vote of thanks to Mr. Booth for the great labour he had undertaken. He was somewhat disappointed that time did not allow of a full investigation of the diagrams, upon which a great deal of time must have been expended, as he knew from his own experience. Speaking generally, Diagram II showed plainly that there was no connection whatever between the two facts there set forth. This was at first sight surprising, but it followed no doubt from what Mr. Booth had said, viz., that birth-rates and death-rates were dependent on different causes, whereas the natural increase was the resultant of the two. There were cases in which a high birth-rate accompanied a high death-rate, but in other cases they did not go together. One of the difficulties to which Mr. Booth had alluded was that the districts were not homogeneous, and it was probably these local differences which made it difficult to explain why the two curves were so completely irreconcilable. When a number of facts such as these were compared together perhaps the greatest value of such a comparison was the amount of thought required

to account for the discrepancies. The agreements taught a great deal, but when properly considered the discrepancies sometimes taught even more. Therefore, even if the results produced by an inquiry of this kind were negative, it did not by any means follow that they were useless; it might be quite the reverse. Speaking generally again, there was a marked agreement between the curves in the first diagram, and that agreement was, on the whole, such as might have been expected. The especial discrepancies to which attention had been drawn in the case of Stepney and other districts deserved more careful inquiry. It was impossible to properly estimate the value of the information given in such a short time, and still more difficult to properly criticise it. He was quite sure that on going home, reading the paper through, and carefully working the matter out, they would find more and more reason to consider it as one more magnificent example of that great ability of Mr. Charles Booth of which they had had so many examples in the past. He would only allude to one other point, which he felt interested Mr. Booth more than any other, and that was his comparison of the two methods of inquiry—one through the School Board officers, and the other through the census. Mr. Booth had shown that certainly the census results, as regards the rooms, did in the main bear out his former conclusions, even more so than could have been expected. He had been at first extremely sceptical as to Mr. Booth's line of inquiry, but he was now thoroughly convinced, and was gratified to find that Mr. Booth had succeeded so admirably.

Mr. T. H. ELLIOTT, in seconding the motion, said that on these occasions they met, not to criticise, but to collect material for subsequent study, and no one who had listened to the Address could find fault with Mr. Booth for not having given them ample food for future reflection. He did not so much refer to the information which their President had given them as to "Happy Hampstead," to which those of them who were not unmarried women would doubtless repair as speedily as possible, but to the more serious facts set out in the paper, to one of which Dr. Longstaff had already alluded. That one-third of the population of this vast metropolis should be living in crowded dwellings, and that a similar proportion existed in the case of those who could not be said to be living in a state of comfort, was a matter for very serious reflection. They must all regret Mr. Booth's absence, because they would have liked to have had the opportunity of testifying to him personally their appreciation of his labours. He had brought to bear on the work of the Society a considerate and lively interest together with great ability. Very few men had done so much for them, and it was a matter of congratulation, both to the Society and to Mr. Booth himself, that the Government on two recent occasions should have testified their appreciation of his work, and in some degree enabled him to carry it into effect. He alluded to the fact that Mr. Booth had taken a prominent part in the committee appointed to consider the arrangements to be made for the recent census; and that he

was also a member of the Royal Commission now sitting upon the Poor Law.

They might well congratulate Mr. Booth on this occasion on the dual opportunity for usefulness which had thus been afforded him, and in sending him a vote of thanks, they would couple with it an expression of hope and confidence that he would speedily be in a position to continue his work, and to bring it to its logical conclusion by the formulation of fitting remedies.

The CHAIRMAN, in putting the vote of thanks, said there was really nothing to add to what had been so well said by Dr. Longstaff and Mr. Elliott, but in Mr. Booth's absence he might take the opportunity of saying one word in commendation of what they had heard. The public were now well agreed that in Mr. Booth they had a gentleman to whom all classes of the community as well as the Society were very greatly indebted. His public spirit had been manifested in so many ways that it could not be too highly appreciated. It was very rare indeed for a gentleman in Mr. Booth's position, not only to devote a great deal of money to investigations of this kind, but still more to devote a great deal of time and energy to see that those investigations were carried out. Mr. Booth having set so good an example, must be highly commended, and he should hope that in some way or other he would receive some public acknowledgment for the great services he had rendered. Very few people had shown so much candour in dealing with the facts investigated. He told them exactly what processes he used in arriving at the facts; there was no concealment of any kind; and he built up his conclusions with the utmost care, as a scientific investigator ought to do. In fact, he really stood in the very foremost rank of statistical investigators, and had investigated subjects which very few people would have the courage to attack, involving as they did so much arduous labour, and so much difficulty in finding a clue through the labyrinth. They would all join in the wish that he might soon be restored to continue the work which he had carried on so long, and which in a very few years might reach its culmination.

THE WEALTH OF FRANCE and of OTHER COUNTRIES. By M. ALFRED DE FOVILLE, *Directeur de l'Administration des Monnaies, Paris.*
[Translated from the "Dictionnaire des Finances." Edited by M. Léon Say.]

IN ordinary language, the substantive "wealth" conjures up the same idea as the adjective "rich," and presupposes a certain accumulation of the goods of this world. But when, in economics, we speak of "riches" generally, and when in finance we use the words "public wealth," it is not merely a question of opulence. The "public wealth" of a country includes everything within its territory which has an appreciable monetary value. Property, in all its forms, and capital, in whatsoever degree, form an integral portion of wealth. The widow's mite is added to the millionaire's *portefeuille*, cottages are included with mansions.

It is also right that in any discussion of public wealth, the total incomes as well as the amount of capital should be taken into consideration, so that the produce of human labour, salaries, wages, and individual profits of all kinds is added to the produce of personal and real estate. With equal capitals, two families or two nations may perfectly well be in totally different circumstances so far as regards wealth, if the personal activity of the one creates more abundant resources than that of the other. In most cases, however, there is a certain proportion, at least relative, between "wealth capital" and "wealth revenue." The important point, in view of the possible interpretations of the word, is to clearly define them so that no ambiguity may be possible.

Public wealth is the medium in which and on which the finances of the nation subsist; there can therefore be no more important problem in financial statistics than that which has for its object the determination of the wealth, with all its variations, of different nations, and the study of its internal distribution. "Such a work," said Lavoisier ("De la Richesse territoriale de la France"), "would take in the whole science of political economy, or rather this science would cease to be one, for its principles would be so clear and self-evident as to no longer admit of any difference of opinion."¹

These questions, long held to be insoluble, cannot yet be answered with precision: but the approximate solutions which we

¹ *Vide* also Turgot, "Réflexions sur la formation et la distribution des richesses," chapters xc et seq.

have now learnt to obtain are already of considerable interest to scientific persons and statesmen.

To introduce as much system as possible into this article, I shall begin with France, and consider first her capital and then her revenue. I shall then deal shortly with other countries.

Capital in France.

Private fortunes and national wealth.—"National capital" also requires to be accurately defined. It is used in two senses, first as representing the sum total of all private fortunes, and secondly the wealth of the nation considered as a whole. These two definitions are not identical. For, if we add up the private fortunes of the 38,000,000 inhabitants of France, it is only right that we should include government stock, which to the owners certainly constitutes an asset. But for the State, the stock issued is a liability, and consequently, if we seek to total the whole wealth of the country, we can no more include the government stock held by the subjects of the State, than the debts—mortgages or others—which are in force between one Frenchman and another: all such debts cancel each other. And if a portion of the debt passes into the hands of a foreigner, by so much should the national assets be reduced. The same remarks apply equally to departmental, communal, and other loans, and the case is very similar with the capital of joint-stock companies, railways, &c.; with bank-notes and the like. On the other hand, if we do not count these different varieties of personal property, we must naturally take into account the value of the property on which all such money was raised: the property of the State, of the departments or communes; the cash at banks and their bills, &c. And so finally the national wealth, at least in France, does not differ very appreciably from the total amount of all the private property.

Preliminary observations.—To estimate in money, either the total of all private property, or the whole national wealth, all that is necessary, theoretically, is to make an inventory of all the various kinds of property, assessing each article at the current market price, just as in the case of a private inheritance. Detractors of such calculations sometimes, it is true, object that, were we to put up for sale, on any particular day, the whole of the lands, houses, personal and real estate of a country like France, we should never succeed in realising the number of millions which we obtain by rating all these different kinds of property at the market price. The objection is trivial, and the hypothesis absurd. No nation has ever dreamed of "liquidating" after such a fashion, and the economist is merely interested in summing up the values which the ordinary conditions of life and trade assign to all that we

possess, even although the great majority of us have no intention of selling. Why should an inventory of national wealth differ from other inventories, small or great? It is the active and not the dead stock, the value in use and not the value in exchange, which we require to measure. This objection needs therefore no further refutation.

A more serious cause of error is the possibility of counting the same thing twice over. For instance, in summing up separately personal property and real property, we must not forget that they have several elements in common, that they dovetail into each other, so to speak. In adding the value of railway shares and bonds to that of the railways themselves, or the value of the shares and bonds of the *Crédit foncier* to that of the lands and houses on which it holds mortgages, we should unduly increase the total; and this is an illusion concerning which we cannot be too careful.

I would also point out that many false impressions would be obtained by imagining that a comparison of the national wealth of different countries could be given in a simple tabular statement. The value of money varies according to the country, and a million in America is by no means the same thing as a million in Europe or Asia. Besides, even supposing the figures to be the same, and to represent the same thing, it may still happen that the stocks at the disposal of two nations would not be equivalent, from the point of view of international competition, if they are not made up of the same materials. The different elements of wealth, in so far as they are economic agents, possess different degrees of efficiency. As Professor Fahlbeck has neatly remarked, it is something like the old story of the pound of lead and the pound of feathers: the weight is the same, but there all resemblance ceases, and if we wished, for instance, to use them as projectiles, what a contrast we should find!² Practically the difference is not less between a million in machinery and a million in jewels, pictures, &c. Pecuniarily equal, these two different kinds of wealth are very far from being of equal use. But I do not wish to investigate the philosophy of wealth, and I have said sufficient to warn the reader of the danger of drawing too absolute conclusions from the following calculations.³

Utilisation of Statistics of Inheritances.—The method which I have suggested for the valuation of the sum total of private

² M. Fahlbeck is of opinion that the principal qualities according to which the "economic properties" of different sorts of wealth are measured are (1) their suitability for production and consumption, (2) their suitability for exchange and transport. He restricts the first class to the precious metals—gold and silver (see the "Bulletin de l'Institut International de Statistique," vol. vi).

³ See in the "Population française," by M. Levasseur, the interesting discussion on the comparative progress of population and wealth.

fortunes—method now adopted by many French and foreign statisticians,—has the advantage of reducing to a minimum the danger of reckoning the same object twice. This method consists in multiplying the average annual amount of inheritances and donations by the average interval between changes of ownership of this nature. This requires some explanation.

The Department charged with the collection of taxes on legacies and successions (changes of ownership through death) and on donations (changes of ownership between the living), has regularly published, since 1826, the annual sums thus taxed (*comptes définitifs des recettes*). The figures are as follows (in millions of francs):—

Inheritances and Gifts Annually Taxed.

Year.	Inher- itances.	Gifts.	Total.	Year.	Inher- itances.	Gifts.	Total.
	Millions of Francs.				Millions of Francs.		
1826.....	1,337	449	1,786	1876	4,702	1,068	5,770
'30.....	1,451	465	1,916	'77	4,438	1,028	5,466
'35.....	1,540	519	2,059	'78	4,748	1,054	5,802
'40.....	1,609	607	2,216	'79	5,004	1,103	6,107
'45.....	1,742	702	2,444	1880	5,266	1,117	6,383
'50.....	2,025	659	2,684	'81	4,914	1,089	6,003
'55.....	2,407	726	3,133	'82	5,027	1,046	6,073
'60.....	2,724	802	3,526	'83	5,244	1,062	6,306
'65.....	3,029	851	3,880	'84	5,078	1,023	6,101
1869.....	3,637	930	4,567	'85	5,407	1,021	6,428
1870.....	3,372	682	4,054	'86	5,369	1,019	6,388
'71.....	5,011	718	5,729	'87	5,409	998	6,407
'72.....	3,951	1,128	5,079	'88	5,372	958	6,331
'73.....	3,712	1,033	4,745	'89	5,059	942	6,001
'74.....	3,931	996	4,927	1890	5,811	937	6,748
'75.....	4,254	1,067	5,321	'91	5,792	1,008	6,800
				'92	6,405	1,012	7,417

I have been careful to add here the gifts to the inheritances, because these donations are but a deviation of the stream of inheritances whose total we wish to ascertain. The greater part of these donations may be considered as anticipated legacies, or as advancements on inheritances: they generally represent the dowry of a daughter or the money to start a son in business, &c.

From 1879 to 1889 the inheritances and donations together have constantly oscillated between 6,000 and 6,500 million francs; and the fact that the latter figure has been considerably surpassed in 1890, 1891, and 1892, is only due to the exceptionally large number of inheritances on account of the extra mortality from influenza.

Similarly, the maximum of 1871-72, which were years of general impoverishment, is due to the enormous death-rate of the *année terrible*.⁴ On the other hand the annual total of donations was diminished in 1870-71, and for other reasons—i.e., the decrease in the marriage-rate—is low at the present moment. Thus, from 6 to $6\frac{1}{2}$ *milliards* of francs is, we may take it, according to the official calculations, the value of the property which, in France, passes from one generation to another in the normal year. This average annual sum clearly represents a definite fraction of the whole mass of individual fortunes.

Although the annual successions have been doubled during the last thirty years, and nearly quadrupled in sixty years, we are not therefore justified in concluding that the value of property has also been doubled and quadrupled in the same time, because certain properties are now taxed which were not so originally, or, in some cases, the method of valuation has been changed (e.g., in 1836, 1841, 1850, 1871, 1875, . . .). But since 1876, at all events, the proportion between the annual total of successions and donations ($S + D$) and the total sum of private fortunes (F) must have been fairly constant. We have now to determine this proportion: $x = \frac{S + D}{F}$.

This ratio is not equal to the *average life* of a man, as many have believed and stated, but to the *average survival* of the heirs over those from whom they inherit, this survival representing the average interval of the successive changes of ownership which call for the intervention of the Treasury. If, for instance, there were always thirty or forty years between the date of entering into an inheritance and the date of being oneself dispossessed of it by death, the annual successions would then represent the thirtieth or the fortieth part of the total inheritable property.

Those familiar with demographic problems will at once recognise that this average survival of heirs is equal, at least in cases of direct lineage, to the average age of the parents at the time of their children's birth. This is also what is usually called the duration of a generation.⁵

⁴ Heirs and legatees being allowed six months, from the date of death, in which to make the usual declarations and pay the duties, the influence of variations in the death-rate is only felt, in statistics of inheritances, after a delay of five or six months.

⁵ To give a clearer view of the problem, let us imagine a nation in which all the children are born when the parents' age is A , and all die at the age B . Then, clearly, the son would inherit at the age $B - A$, and would keep the inheritance during $B - (B - A) = A$ years. A would also clearly represent the exact periodicity of the successive generations.

To what extent do the successions other than those from parent to child alter the average survival? I do not think they alter it much, and in any case there is

Since the time of Herodotus, three generations have always been held to cover a century; which would give $x = 33$; and this was still, not so long ago, Dr. Vacher's estimate. After very careful consideration, I have been led to take a somewhat higher figure: thirty-five or thirty-six years. Several facts have led me to this conclusion. In Germany, Rümelin and Goehlert, and in Austria, Inama-Sternegg, have adopted this figure as the result of purely demographical calculations. In France an official inquiry many years ago (which ought to be renewed) showed that real estate changed hands, on an average, once in twenty years: by alienation every forty-five years, and by succession every thirty-six years:—

$$\frac{1}{36} + \frac{1}{45} = \frac{1}{20}.$$

I shall therefore assume (subject to subsequent correction) that the average annual total successions are about the thirty-sixth part of the whole amount of inheritable property: $F = 36 (S + D)$. And, accepting the Treasury statistics for the years 1879-89, $S + D = 6\frac{1}{4}$ *milliards*, it follows that $F = 225,000,000,000$ frs.

We have now to inquire how far the administration really accurately registers the values of the inheritances and annual donations. It is only too easy to see that, in this connection, the official statistics, in some points insufficient, are in other points too high.

The official statistics are incomplete:—

(1.) Because certain inheritances (generally very small) and many donations (gifts from hand to hand, both small and great), do not come at all under the notice of the Treasury.

(2.) Because, even when the inheritance is registered, the true amount of the specie, certain sums owing to the deceased, bonds, shares, &c., may often be concealed with impunity.

(3.) Because the valuation of furniture, jewelry, paintings, &c., is generally too low; the same holds good of other kinds of personal property which it is difficult to estimate exactly, and even in the case of real estate, the capitalisation enjoined by law—20 or 25 times the gross letting value, according as the estate is urban or rural^a—is often too low.

On the other hand the official statistics are too high:—

(1.) Because the French law, in spite of the reform proposed by the Government itself, does not permit the heirs to deduct from

nothing to prove any alteration. The probable survival is considerably diminished when the brother inherits, but, on the other hand, it is considerably increased in the case of a grandson. And so in other cases.

^a The law of 21st June, 1875, raised the multiplier from 20 to 25 in the case of rural real estate.

the assets of the dutiable inheritance, the debts which often reduce the value very considerably.

(2.) Because, in the case of an inheritance, where the reversionary interest of an estate goes to one person, and the usufruct to another, the French law, killing two birds with one stone, contrives to augment the dutiable value by 50 per cent.⁷

(3.) Because the method of assessment enjoined by law for town property—20 per cent. of the gross letting value (without any deduction for taxes, expenses of maintenance, periods when a house is untenanted, and bad debts)—often rates it at a higher figure than the true selling value.

These are so many causes of error, but they act in contrary directions; and the importance of the omissions is at least comparable with that of the additions, for the corrections necessary on either side apparently surpass 500 millions, without reaching 1,000 million francs, in the year. By adhering to the official figures, there is therefore not much chance of going far wrong; and in any case, the error, on one side or the other, would not vary much from year to year; and consequently the results successively obtained, being modified in the same proportion, can serve as the basis for some useful comparisons.

I therefore consider the formula $F = 36 (S + D)$ as approximately true, S representing the average total annual successions, and D the average total annual donations. And I have shown that this formula leads us to conclude that the *total amount of private property* in France, since 1879, is about 225,000 millions of francs.

The national wealth, which we have seen is not the same thing, seems to amount to about an equal sum, when the liabilities have been deducted.

Former Estimates based on different methods.—Much higher valuations than mine have been made, at periods when France was certainly less rich than she is to-day. But the authors made several more or less serious errors in their reasoning.

M. Elisée Reclus, the well-known geographer, considered that to deduce the national capital from the national income, it would be sufficient to capitalise at 5 per cent. the 25 *milliards* of revenue which he supposed the French people to own. M. Reclus thus obtained 500 *milliards*, a very large figure,⁸ and Dr. Talandier did not hesitate to consider this as a plausible estimate of the total capital owned by the French.⁹ M. Sciana, engineer, went further,

⁷ The person receiving the reversionary interest pays as if he received the whole property, and the usufructuary pays half.

⁸ *Vide* his "Nouvelle Géographie universelle," vol. ii, p. 885.

⁹ *Vide* the "Journal officiel," 29th January, 1878, p. 810.

and with great liberality attributed to us 400 *milliards* of real estate and 200 *milliards* of personal estate, or 600 *milliards* in all. Those who have published these enormous figures, forget that, although the total incomes of the French may amount to 25 *milliards*, more than half of this represents salaries, the earnings of individual labour, and not interest on capital.¹⁰

Dismissing therefore these unfortunate calculations, I shall now consider some estimates made by men who may be considered authorities on this subject.

J. B. Say, at the time of the Restoration, calculated the real estate in France as worth 60 *milliards*, and put the personal estate at the same value, the total therefore being 120,000 million francs. This is too high for that period.

M. Maurice Block, in 1873, thought that he might “venture” on the following very rough estimates as measuring the progress of wealth in France:—

Date.	Real Estate.	Personal Estate.
	<i>Milliards of Francs</i>	
1820.....	40	15
'40.....	—	40
'47.....	100	—
'50.....	—	45
'60.....	—	114
'69.....	—	150
'73.....	120	—

It will be noticed that to avoid all danger of including any kind of wealth under both heads, M. Block refrains from adding the two items together.

The following are a few other valuations, which I reproduce as having a certain interest, but without attempting to discuss them:—

¹⁰ Even if we add the estimated value of *human capital* to that of *owned capital*, we should never arrive at 500 *milliards*, for to value human capital in money we must capitalise, not the gross amount of wages and salaries, but the *net product* of the human machine, deducting the amount required to keep this machine in good working order.

Authors.	Date.	Real Estate.	Personal Estate.	Total Wealth.
		Milliards of Francs.		
E. de Girardin*	1853	92	33	125
Wolowski†	'61	120	55	175
Duc d'Ayen‡	'72	100	95	195
Dr. Vacher§.....	'78	216	44	260
A. Amelin|| .....	'78	135	105	240
S. Mony¶	'81	115	101	216

* *Vide* the table at the end of his book, "L'Impôt."

† *Vide* the "Journal Officiel," 23rd December, 1871; proceedings of the National Assembly on the 22nd.

‡ *Vide* "Journal des Economistes," May, 1875. *Vide* also "Revenu "Salaire et Capital," 1872.

§ *Vide* "Journal de la Société de Statistique," 1878, p. 281.

|| *Vide* "L'Echo agricole," August and September, 1878.

¶ *Vide* his "Etude sur le travail," 2nd edit., 1881.

Subdivision of the National Wealth according to the nature of the property.—The inheritances and donations taxed are subdivided as follows at the different periods ¹¹:—

Periods.	Successions.		Donations.		Total.	
	Real.	Personal.	Real.	Personal.	Real.	Personal.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
1827-31.....	65	35	45	55	60	40
'37-41.....	63	37	45	55	58	42
'47-51.....	61	39	49	51	58	42
'57-61.....	57	43	46	54	54	46
'67-71.....	54	46	45	55	52	48
'77-81.....	53	47	45	55	51	49
'87-91.....	50	50	40	60	49	51

In the last year for which we have returns (1892), the personal property taxed is subdivided as follows:—

	Per Cent. of the Total Successions during the Year.
French and foreign Government stock	13 per cent.
Other French and foreign stocks	39 "
Other personal property (cash, book-debts, business, merchants' stock, machinery, farm implements, cattle, horses, carriages, boats, furniture, jewellery, works of art)	48 "
	100 "

¹¹ *Meubles* and *immeubles* (literally *movable* and *immovable* property) have been translated generally throughout this article as *personal* and *real* property.

All these figures show how rapid has been the expansion of the personal wealth during the nineteenth century, since, being valued in 1830 at only about one-half of the real property, it seems now to be rated actually above the latter; while judging by the values taxed, the increase, in sixty years, seems to have been more than 250 per cent. in the case of real property (3,158,000,000 frs. in 1887-91, as against 893,000,000 in 1827-31), and nearly 600 per cent. in the case of personal property (3,300,000,000 frs. in 1887-91, as against 480,000,000 in 1827-31).

But the proportions in the last table do not even yet exactly represent the true composition of the wealth of France, since, besides the variations in value introduced by fresh legislation, the errors noticed above affect the two kinds of property differently. For instance, it is practically personal property only which is affected by parties understating their wealth.

To arrive somewhat nearer to the truth, there is accordingly room for a careful examination of each of the elements of the national wealth of which the actual value can be directly revealed by government inquiries or by the researches of specialists.

(1.) *Landed Property.*—The value of the cultivated soil in France, after having increased considerably during the first three-quarters of the century, and especially in the third quarter, has gone back during the last fifteen or twenty years. Combining the various sources of information, I think the average value of the *hectare*, since the Revolution, may be taken to be as follows:—

	Frs.		Frs.
In 1789	500	In 1862	1,850
„ 1815	700	„ '74	2,000
„ '21	800	„ '79	1,830
„ '35	1,000	„ '84	1,785
„ '51	1,275	„ '92	1,700

The averages given for 1851 and 1879 are the result of the two important inquiries set on foot by the Administration of Direct Taxation in those years, preparatory to a fresh valuation of the landed revenue. The results of the latter inquiry were summarily revised in 1884.

The inquiry of 1879 assessed the 50,035,000 *hectares* of taxable landed property at a total value of 91,584,000,000 frs.: if we include the untaxed lands (2,822,000 *hectares*) we should very probably reach a sum of 95 *milliards*. The revision of 1884 has already brought down the 91½ *milliards* to 89 *milliards*, and at the present moment, all things considered, we can scarcely consider the whole landed property, in the eighty-seven departments, as

worth more than 85 *milliards* of francs. Of this total 75 *milliards* would represent the value of private property, subjected to changes of ownership through deaths or gifts.¹²

(2.) *House Property* (including houses, factories, &c.)—The Administration of Direct Taxation in 1887-89 made a searching inquiry into the house property liable to taxation, and this has been the starting point of an important fiscal reform. The immediate object of the inquiry was to ascertain the letting values, and indirectly the selling values. The total worth of the taxable house property comes out at 49 *milliards* of francs (towards which Paris alone is responsible for 11 *milliards*), and the so-called agricultural buildings, which are not taxed, but of which the approximate value was also calculated, would add quite 10 per cent. to this. Even if we admit that the assessors, in certain districts, have somewhat exaggerated the figures, we can nevertheless consider the whole value of house property, taxed and untaxed, to be 55,000 million francs; of which fully 50,000 millions can be set down as owned by private individuals, and is subject to changes of ownership by deaths or gifts.

(3.) *Specie*.—By using the periodical investigations of the Department of Finance (1878, 1885, 1891), I have been led to assign to France, in metallic currency, a sum of 4,000 million francs in gold, and 2,500 millions in silver (face value), *i.e.*, a total of 6,500 millions. On the 8th December, 1893, the Bank of France held a large proportion of this, *viz.*, 2,982 millions (gold, including bullion, and silver). But on the other hand, nearly 3½ *milliards* of its notes are in circulation. Adding together the metal and the bank-notes (although the latter include the bullion on which they are based), we should thus have 10 *milliards*, of which 7 are actually in circulation. But a large proportion of this specie is absorbed by the financial companies, railway companies, and various associations. And we therefore cannot assume that there is actually more than some 4,500 million francs owned individually.

(4.) *Convertible Securities* (Government stock, shares, bonds).—The multiplication of convertible securities has been extraordinarily rapid in France during the last half century. Our public debt alone represents, at the market price, some 30,000 million francs, and foreigners to-day hold but a small portion of our stocks. And

¹² Of the 52,857,199 *hectares*, private property accounts for 45,025,598 (85·19 per cent.); the State owns 1,011,155 (1·91 per cent.); the departments 6,513 (0·01 per cent.); the communes 4,621,450 (8·74 per cent.); various establishments 381,598 (0·72 per cent.); while in the case of 1,810,885 *hectares* (3·43 per cent.) the ownership is not stated. [*Enquête agricole de 1882*, published in 1888.]

on the other hand, the tax on the income from securities in 1890, was raised on nearly 1,750 million francs, including—

	Revenue in Mlrs of frs.
Shares of French companies	636'4
French bonds : departmental and communal loans	814'6
Foreign shares	60'8
„ bonds	70'1
	<hr/>
	1,581'9
	<hr/>

In 1891 and 1892, the amount was even greater; and, at the present rates of interest, we can scarcely consider the capitalised value of this enormous revenue as being less than 30 to 35 *milliards*. Adding to the above mentioned 60 or 65 *milliards* the value of the foreign stocks which are not taxed in France, or which escape the tax from the holders residing out of the country, we shall easily arrive at a total of 75 or 80 *milliards*. This figure has already been proposed, and maintained, on different occasions by M. A. Neymarck, whose authority on these questions is well known. The share of this wealth belonging to private individuals seems to be fully 70 *milliards*.

(5.) *Agricultural Implements, Farm Live Stock, Horses*.—This is another element of the national wealth that can be directly calculated. The agricultural investigation of 1882 valued it at 9,000 million francs, exclusive of those horses which were used for purposes other than agriculture. We can therefore confidently say 10 *milliards*, even if we confine ourselves to private wealth.

(6.) We still have to consider the various assets other than those enumerated above, such as the plant of various industries, tradespeople's stocks, the salaries from public offices, business connections, &c., and also furniture, plate, jewels, clothing, works of art, collections, &c., concerning all which a fair estimate would seem to be that their value is about twice the letting value of the houses.

In fine, the following may be taken as a reasonable subdivision of the whole sum of the private wealth (*heritable wealth*):—

	Milliards of frs.
Lands	75
House property (including factories)	50
Specie	5
Convertible securities.....	70
Agricultural implements, live stock.....	10
Other personal property, exclusive of that of which the } value has already been reckoned under real property }	15
	<hr/>
	225
	<hr/>

If under each heading we had taken the gross assessment at which it is reckoned in the national wealth, public or private, we

should have a much higher figure; but, as explained above, we should require to make considerable reductions on account of liabilities, &c. (the national debt, to begin with), and we should thus, in all probability, obtain a net total of something under 225 *milliards* of francs.

Geographical Distribution of the Capital Wealth.—In a country such as France, the geographical distribution of wealth is necessarily extremely unequal; and in this connection it is only possible to refer the reader for fuller details to the two “Atlas “de Statistique financière,” published in 1881 and 1889 by the Ministry of Finance.¹³ In this the sums annually transferred by inheritance or by deed of gift are divided among the eighty-seven departments, (1) per *hectare*, (2) per head of the population. During the period 1885-87, for instance, the average value of the *hectare* varies from 30,400 frs. in the department of the *Seine* to 14 frs. in the *Hautes-Alpes*, and the average per head varies from nearly 500 frs. in the *Seine* to 54 frs. in the *Corrèze*. The influence of large towns on the localisation of wealth is naturally enormous.

Incomes in France.

Collective Evaluations.—I shall here consider the national income to be simply the sum of all private incomes; that is, in France, the sum of all the resources for satisfying their current requirements annually at the disposal of the 38 or 38½ millions of individuals who, whether grouped in households and families or not, make up the French population. In most cases the idea of a private income is perfectly simple, but in certain instances there may be some doubts, and the following observations will therefore not be out of place.

(1.) The income of a tradesman is very far from including all the receipts which come into his till: we must consider as his income only that portion of these receipts which remains over for his private use after he has paid all the expenses necessitated by his trade.

(2.) Revenues in kind are incomes: consequently a family living on the produce of their field, although receiving no money and spending none, would not be without an income: their revenue would be measured by the value of the produce annually consumed. As a matter of fact, many French people, especially in the country, own the houses they inhabit; in this case also the letting value of their home should be included in their income.

I should add that it is very common for the income of a family

¹³ *Vide* also Ad. Coste, “Etude Statistique sur la richesse comparative des départements de la France:” “Journal de la Société de Statistique de Paris,” February, 1891, p. 47.

or an individual to consist of detached portions of the income of some one else. The persons of independent means buying bread, procures a profit to the baker, *i.e.*, a portion of revenue; the baker who buys a coat contributes similarly to the income of the tailor. The same penny, or the same shilling can, in the same year, be included in the income of a hundred different families.

The national income, thus defined, is not easily determined. Most statisticians who, during the last century or so, have undertaken such calculations, have made separate inquiries into the income from land and that from personal property. The net landed revenue (including that from house property) has been officially assessed at 1,440 million francs in 1791, at 1,580 millions in 1821, at 2,643 millions in 1851, at 3,216 millions in 1862, at 4,049 millions in 1874; and the two last inquiries by the Administration of Direct Taxation, in 1879 (revised in 1884) on landed property, and that of 1889 on house property, bring this net taxable revenue up to 4,671,000,000 frs. (2,581,000,000 from lands, and 2,090,000,000 from houses—excluding the purely agricultural buildings). I will only remark that the totals include, besides private property, that belonging to the departments, communes, hospitals, asylums, companies, societies, &c.

As to the income from personal property, we have only for former times unofficial calculations of varying merit. Delai d'Agier, in 1791, considered this income as comparable with that from lands, and put it at 1,050 millions, of which 400 millions represented the interest on capital, stock, &c., and another 300 millions were public salaries. Poussielgue, in 1817, put it at 2,130 millions. In 1848, M. Goudchaux, author of a proposal for an income tax, considered that it was 3 or 4 *milliards*; and later, M. Hippolyte Passy made some calculations for a projected law in 1849, based on an estimate for real and personal revenues, of 6 *milliards*, but he stated that this was much below the real value.

Under Louis Philippe, in fact, the whole revenue from personal estate was generally supposed to be somewhere between 6 and 10 *milliards* of francs. M. Edouard Vignes calculated the income from personal property at 8,169 million francs, of which 1,734 millions were the interest on capital, 2,000 millions were profits of industry, 900,000,000 the salaries of professional men, and 3,535,000,000 the wages of manual labour. At the same period, in an article published in the "*Revue des Deux-Mondes*" (January, 1849), M. Cochut came to the conclusion that the *personal* revenue was 3,137 millions, made up as follows: profits from trade and industry 1,555 millions; revenue from government posts and liberal professions 364, salaries, pensions, and remunerations 454, income from capital in Government stock or private undertakings 1,764.

The same author, ten years later, estimated the whole French revenue at 16,000,000,000 frs., and at about the same time, M. de Parieu expressed the opinion, that exclusive of salaries, the revenue from personal estate must be about equal to that from real estate.

After the military and financial disasters of 1870-71, the question came before the Government as often as a proposal was made to introduce some kind of income tax. On the 22nd December, 1871, in the National Assembly, during a debate which has remained famous, M. Wolowski guaranteed that there would be, after deduction of all incomes below 1,200 frs., a minimum of 6 to 7 *milliards* of francs, which could be subjected to taxation: "incomes from the general produce of industry, from labour of all kinds, from wealth already acquired" On the same day, M. Teisserenc de Bort, attacking the proposal advocated by M. Wolowski, said: "The works of the most competent statisticians estimate the whole revenue of England to be between 22 and 25 *milliards*." For the total revenue, M. Wolowski, a little later, considered 20 to 22 *milliards* to be a probable figure, and M. Rouvier, in his speech of the 3rd February, 1874, while adopting on his own account M. Cochut's evaluation of 16 *milliards* in 1859, attempted to justify M. Wolowski's estimate by some ingenious comparisons between France and England. Considering these various data, it will be seen that the best qualified authorities hesitated, a quarter of a century ago, to ascribe to France more than 15 *milliards*, although they agreed that the general wealth had made enormous progress since the time of the first empire, which progress, by the way, the depreciation of the monetary metals caused to appear still greater. After the disasters of 1871, the estimates still varied between 10,000 and 20,000 or 22,000 million francs.

But shortly after, France, in spite of the losses incurred, saw her wealth increase on every side, and during the last ten years, the usual estimates have varied between 20 and 30 *milliards* of francs. Some authors still remain below this figure, as M. Ballue¹⁴ (8 *milliards*), and M. Peytral¹⁵ (16 *milliards*), or go beyond, like M. Cochut,¹⁶ who was led by an illusory theory to say 36 *milliards*, after having put it at 16 in 1859. These extreme results are explained, in all cases, by the fictitious conditions, if I may say so, under which the calculations were made. For the methods employed by different authors to arrive at the national revenue

¹⁴ *Vide* Ballue, "Report of the 26th November, 1886, on the Reform of the Assessment" (Chamber of Deputies, No. 1,314).

¹⁵ *Vide* "Projected Law of 30th October, 1888," and Appendices.

¹⁶ *Vide* in the "Revue des Deux-Mondes," 1st December, 1883, the article "Enchérissement des marchandises et des services."

vary greatly, and in fact, there does not seem to be any absolutely certain way of getting at the truth.

One of the methods suggested consists in finding the proportion between the income and the production—agricultural, industrial, &c.—of a country; but it is not at all easy to determine this ratio, and the ideas of M. Block, the Duc d'Ayen, and M. Cochut, on this point are far from identical. Besides which, it is very difficult to assess the national production, gross and net produce, at all satisfactorily. Extraordinary valuations have sometimes been published in this connection, for instance, that of M. le Trésor de la Rocque, formerly State Councillor. Advocating protection in 1891, he succeeded, by means of a long addition, in which items which had obviously been already included once were made to do duty a second time, and in which the most unexpected blunders occurred, in reaching a total of 37 *milliards*, made up of: agricultural and partly agricultural produce 26 *milliards*, and industrial products 11 *milliards*. M. E. Levasseur had no difficulty in proving that, especially as regards agriculture, M. le Trésor de la Rocque's estimates were more than fanciful.¹⁷

I think that the best way of obtaining any trustworthy data on the national revenue consists in proceeding by successive approximations. In the first place, we can be tolerably certain that the landed revenue is about 5 *milliards* of francs, and that personal property produces at the present moment an income, not merely equal, but superior to that of the real property. This gives a minimum of 10 *milliards* of francs for the income from wealth already acquired. Besides this, it is fairly certain, for any one who has any knowledge of the conditions of existence of the greater number, that the personal gains in agriculture, industry, arts and commerce, wages, &c., are at least of as much value as the produce of capital in providing the French people with the means of existence. The national revenue cannot then, at the present day, be supposed to be less than 20 *milliards*.

The next step is to examine the tax, which also offers a means of investigation and a check. M. P. Leroy-Beaulieu, in the preface to the third edition of his "*Traité de la Science des Finances*," endeavoured to ascertain the ratio, in the different degrees of the social scale, between the income of the tax payers, and the amount of the tax paid to the Treasury (including tobacco, postage, &c., as well as the departmental and communal rates). For a Parisian working man's family, he found 10·8 per cent. For a millionaire (possessing an income of 80,000 frs. or over), he found 13 or 17 per cent., according to the nature of his riches (personal or real). All

¹⁷ *Vide* also "*La Consommation nationale et l'exportation*," by A. de Foville, in the "*Economiste français*," 11th April, 1891.

things considered, there is reason to believe that the average rate of taxation in France is not far from 15 per cent. Now, in 1892, the State levied 2,780 million francs, the department 165, and the communes at least 530 millions; a total of 3,475 millions of francs, or nearly $3\frac{1}{2}$ *milliards*.¹⁸ This sum must be less than 12 per cent. of the national income, if the latter is more than 30 *milliards*; it must be more than 17 per cent., if the revenue is below 20 *milliards*. The national income must consequently be somewhere between 20 and 30 *milliards* of francs; as is, moreover, generally admitted, we should not be far wrong in putting it at 25 *milliards*.

Subdivision of Incomes according to their source.—Many of those who, in the past, have endeavoured to calculate the national income, have sought to attain their end by means of a detailed inventory. I shall here merely notice the most recent official or semi-official data.¹⁹

The notes furnished in 1885 to the parliamentary commission on the reform of the assessment for taxation, contained the following estimates:—²⁰

	Net Revenue. Mlrs. of frs.
Landed property	2,646
House „	2,200
Convertible securities taxed	1,595
Mortgages and unregistered debts.....	500
Unredeemable Government debt ²¹	740
Redeemable debt ²¹	106
Life annuities	192
Total.....	<u>7,979</u>

The first group of revenues thus amounts, in round numbers, to 8 *milliards* of francs (some of the figures ought certainly to be higher). On the other hand the same thing is evidently counted twice over, when the income from mortgages is added to that from the mortgaged property. It is known also that in some cases the convertible stocks subjected to the “proportional tax” really represent fixed property.

To the above figures must be added some 15 *milliards* of francs

¹⁸ *Vide* the “Bulletin de statistique du ministère des finances,” April, 1892, page 470.

¹⁹ *Vide* M. Ballue’s report, and that of M. Yves Guyot (14th October, 1886), concerning the income tax, No. 1,130.

²⁰ Of the older works, I should mention here the “Essai comparatif sur la formation et la distribution du revenu de la France en 1815 et 1835,” by J. Dutens, 1842.

²¹ The whole debt owned by Frenchmen is included in this, which is not correct; on the other hand, the foreign government stocks owned by Frenchmen are excluded, these stocks not paying the 3 per cent. (now 4 per cent.) tax.

for wages, profits on individual work, or mixed incomes (*i.e.*, from licences, &c.). The net revenue from the last source, according to the calculations of the Administration of Direct Taxation, cannot be far from 3 *milliards*. And even for the poorest wage-earners, agriculturists or artisans, we can put their earnings at almost as many *milliards* as they number millions. The incomes of medical men, barristers and lawyers,²² can be reckoned by hundreds of millions; and those of government, departmental and communal servants amounted, even in 1886, to more than 500 millions, exclusive of pensions.²³

Classification of Incomes according to importance.—

If the determination of the total of all the incomes in France is a difficult task, how much more so is not the classification of incomes according to their size? It would be an awkward question to ask anyone to draw the “pyramid of private fortunes,” after the fashion of the “pyramid of ages.” All that we can say of the “pyramid of fortunes” is that it is not a pyramid at all, for the large fortunes are infinitely less numerous than the medium-sized; and these latter again are infinitely less numerous than the small ones. It is thus in every country, although the disproportion is less in France than among some of the neighbouring nations. Besides, this disproportion tends to diminish rather than to increase; nothing is more untrue than the proverb: “the rich daily increase their wealth, and the poor daily increase their poverty.” The contrary holds good: there is a “tendency towards less inequality in the conditions.” Of this, M. P. Leroy-Beaulieu, in France,²⁴

²² *Vide* the remarkable figures given by Mr. Goschen in his budget statement for 1892-93.

²³ The following were the figures laid before the Chamber of Deputies at that time:—

	Number.	Total Salaries.
		frs.
Government (exclusive of teachers)	204,242	322,861,000
Departmental.....	8,677	15,590,000
Communal (including teachers)	247,943	210,580,000
	460,862	549,031,000

²⁴ *Vide* his “*Essai sur la répartition des richesses*,” second edition, 1883. *Vide* also his article on “*La lenteur de l’accroissement de la fortune des classes aisées et opulentes en France*,” in the “*Economiste*,” 23rd January, 1892. M. Leroy-Beaulieu’s results are in no way impaired by the excessive increase of certain private fortunes. On this point, A. de Foville’s “*Le Morcellement*” (p. 217), and De Varigny’s “*Les Grandes Fortunes aux Etats-Unis et en Angleterre*, 1889,” may also be consulted. M. de Varigny considers that the number of fortunes of over 25,000,000 of francs may be about 700, of which 200 are owned by Englishmen, 100 by citizens of the United States, 100 by Germans

and Mr. Goschen,²⁵ in England, have convinced all rational men. But there will always be, from the force of circumstances, many more poor than rich.

Among writers who have sought to classify the French private fortunes in order of size, I shall only mention, as a matter of history, the geographer Balbi, whose imaginary valuations are now fifty years old, and M. J. Paysant, who published in a socialist paper²⁶ some years ago, in opposition to those of Balbi, statistics whose exactitude he left the reader to verify, doubtless because he had not succeeded in doing so himself. The valuations made, with all reservations, by the Duc d'Ayen²⁷ in 1875 only included incomes other than those drawn from trade and labour. He put them at 4,080 million francs, and divided them among 2,411,290 families; thus 31,290 families have, excluding trade and labour, an income of more than 25,000 frs. (altogether 1,090 millions); 380,000 receive from 1,500 to 25,000 frs. (in all 1,490 millions); lastly, 2,000,000 families have from 100 to 1,500 frs. (total 1,500 millions). I do not here reproduce the subdivisions of these groups as they appear in the Duc d'Ayen's table. The philosophical results of his studies on social economy appear to be more deserving of credit than his statistics.

M. Leroy-Beaulieu has devoted a whole chapter (the nineteenth) of his "*Essai sur la répartition des richesses*" to the examination of the chief statistical writings by means of which some idea may

(including Austrians), 75 by Frenchmen, 50 by Russians, 50 by natives of India, &c. The more or less trustworthy data which M. de Vaigny uses include the following names at the head of the list of modern Croesuses:—

Name.	Nationality.	Capital.	Revenue.
		Mlrs. of frs.	Mlrs. of frs.
Jay Gould	American	1,375	70
J. W. Mackay	"	1,250	62
Rothschild	English	1,000	50
C. Vanderbilt	American	625	31
J. P. Jones	"	500	25
Duke of Westminster ...	English	400	20

Astor, who died recently, after Vanderbilt and Jay Gould, had also at least 500,000,000 frs., if not more. The "*Year-Book of American Millionaires*" (1,000,000 dollars and over), recently published by the "*New York Tribune*," contains 4,107 names!

²⁵ *Vide* "*Journal of the Royal Statistical Society*," December, 1887, p. 589.

²⁶ *Vide* the "*Ligue nationale du droit des travailleurs à la retraite*," No. 2, 1882.

²⁷ *Vide* "*Estimation de la richesse en France et en Angleterre*," in the "*Journal des Economistes*," May, 1875, p. 278; also his "*Revenu, salaire, et capital, leur solidarité*," 1872.

be formed of the distribution of wealth in different countries. In France, having no income tax on which to rely (as in England or Germany), M. Leroy-Beaulieu has restricted his attention to Paris. He considered that the statistics of the tax on personal property, "when interpreted with wisdom and circumspection," justified the following division of the incomes of the Parisian population:—

	Per 1,000.
421 incomes of over 266,000 frs.	0.65
1,413 " varying from 266,000 to 133,000 frs.	2.35
3,049 " " 133,000 " 70,000 "	5
9,985 " " 70,000 " 32,000 "	15
21,453 " " 32,000 " 12,000 "	31
6,198 " " 12,000 " 10,000 "	9
17,202 " " 10,000 " 7,500 "	25
21,147 " " 7,500 " 6,000 "	31
61,083 " " 6,000 " 4,000 "	89
74,360 " " 4,000 " 2,400 "	108
468,641 " of less than 2,400 frs.	684

The statistics of horses and carriages, on the one hand, and those of burials, on the other, seem to bear out the above approximate distribution.

In the whole of France, M. Leroy-Beaulieu does not believe that there are more than 700 or 800 persons having an income of 250,000 frs. and over, or that there are more than 18,000 to 20,000 incomes between 50,000 and 250,000 frs. He also expresses the opinion in his "*Traité de la science des finances*" (fifth edition), that "three-fourths of the accumulated fortunes, and probably "more than four-fifths of the whole national income, are in the "hands of workmen, labourers, small tradespeople, and the owners "of small capitals."

These calculations may advantageously be compared with the results found in England or Germany by means of the direct taxation of incomes.

FOREIGN COUNTRIES.

Preliminary Observations.—Estimates of the public wealth in certain foreign countries aim in some cases at the capital, in others the revenue, according as the fiscal or other data available in the different countries make the one or the other the easier task. A similar selection is necessary here.²⁸

²⁸ In 1828 the "*Almanach de Gotha*" made an attempt to add up the average income per head of population in the different European States. M. Camille Pelletan, in his report (22nd November, 1890) on the financial situation of France, exhumed some of these conjectural estimates: Great Britain, 625 frs.; France, 325 frs.; Prussia, 170 frs.; Austria, 100 frs. Fifty years later Mr. Mulhall, in "*The Progress of the World*," improvised the same figures, as follows:—United Kingdom, 820 frs.; France, 625 frs.; Germany, 425 frs.; Austria-Hungary, 300 frs.

United Kingdom.—Despite its small area, the United Kingdom has become the richest in Europe, and France is the only country, so far as capital is concerned, which can be at all compared to it. The following are the most authoritative estimates of its wealth, dating from the seventeenth century:—

Author.	Date.	Total Wealth.	
		Mln. £'s	
Petty	1660	250	England and Wales
Davenant	1703	490	"
Young	'74	1,100	"
Beeke, Eden	1800	1,740	Great Britain
Colquhoun	'12	2,190	United Kingdom
Lord Liverpool	'22	2,600	"
Pablo Pebrer	'33	3,750	"
Porter	'40	4,100	"
Leone Levi	'60	6,000	"
Robert Giffen	'65	6,113	"
"	'75	8,548	"
"	'85	10,037	"
The Treasury	'86	9,400	"

Dr. Giffen, Assistant Secretary to the Board of Trade, has treated the subject more methodically than anyone. He has taken the different incomes, according to the income tax returns, and added to them the incomes exempted from the tax (estimated on very reasonable grounds) or understated by the tax payers, and capitalised the whole (though he is somewhat doubtful as to the rate at which the capitalisation should be made). At the present moment, Dr. Giffen's method gives a result of about 10,400 to 10,800 millions sterling exclusive of the value of the public funds. The calculation for 1885 was as follows:—

[000's omitted in amount columns.]

	Income.	Years' Purchase.	Capital.
	£		£
Schedule A. { Lands	65,039,	26	1,691,313,
{ Houses	128,459,	15	1,926,885,
{ Other profits	877,	30	26,310,
Total	194,375,	—	3,644,508,
B. Farmers' profits	65,233,	8	521,864,
C. Public funds other than home funds...	21,096,	25	527,400,
{ Foreign and colonial securities	9,859,	20	197,180,
{ Railways in United Kingdom	33,270,	28	931,560,
D. { " out of "	3,808,	20	76,160,
{ Mines, ironworks, canals, water-works, fisheries, market tolls, &c. }	65,106,	various	1,179,639,
{ Trades and professions	36,096,	15	541,440,
Total under income tax	428,843,	—	7,619,751,
Trades and professions omitted	8,179,	15	122,685,
Income of non-income tax paying classes derived from capital	67,000,	5	335,000,
Foreign investments not in Schedules C and D	50,000,	10	500,000,
Movable property not yielding income	—	—	960,000,
Government and local property, say	—	—	500,000,
	554,022,	—	10,037,436,

It should be noticed that of the whole 10,000 million £ the Government property accounts for 500 millions.

I regret that I cannot here reproduce, with the figures, Dr. Giffen's interesting commentaries on them.

Mr. Goschen, formerly Chancellor of the Exchequer, has shown that the small fortunes are those which increase most in England.²⁹ The same conclusion is brought out, so far as concerns the profits of industry and commerce (Schedule D of the income tax) by the classifications made from time to time by the Government.³⁰

We have seen that Dr. Giffen estimates the income drawn by the English people from their capitals at 554,000,000*l.* With the produce of personal labour, the total revenue would certainly amount to well over 1,200,000,000*l.*³¹

Belgium.—In 1880, one of the ministers, M. Malou, estimated the real property (*immeubles*) of Belgium at 11 *milliards* of francs (house property, &c., 3,400,000,000 frs., landed property 7,500,000,000 frs.) exclusive of the real property exempt from the land tax. M. Mossalski, Professor at the University of Louvain, had in 1878 attempted the direct valuation of the whole wealth of

²⁹ *Vote "Journal of the Royal Statistical Society,"* December, 1887, p. 589.

³⁰ *Vote "28th Report of the Commissioners of Inland Revenue,"* 1885.

³¹ M. Paul Leroy-Beaulieu put it at 1,120,000,000*l.* in 1878.

the country, and arrived at a total of 30 *milliards*, a sum which has often since been quoted. M. Graux believes this to be below the mark, and thinks it should be at least 34 *milliards*. M. Beernaert, Minister of Finance, has an even better opinion of the wealth of his country, and I am inclined to think he is right.³²

Holland.—For Holland we have the learned researches of M. Boissevain, which M. Pierson, Minister of Finance, has utilised for his tax on wealth.³³ Official statistics in 1880 put the real property at 11·4 *milliards* of francs (8·2 *milliards* for the landed, and 3·2 for the house property). In 1892, the Minister, taking into consideration the depreciation of rents, only estimates the landed property as worth 4·4 *milliards* (twenty times the taxable income), and the total *real* property is reduced to 7·7 *milliards*. For the personal wealth, applying to the existing capital the proportion deduced from the declared inheritances, we get 14·3 *milliards*. Hence the total wealth would be 22,000 million francs.

Germany.—The revenues of Prussia and Saxony are better known than their capital, thanks to the income tax. The late Dr. Soetbeer studied the statistics of this tax with great care, and I shall take the following summary totals from his writings.

Prussia.—For Prussia, Dr. Soetbeer's estimates are as follows:—

Years.	Number of Incomes.	Total Value of Incomes.	Average Income.	Average per Head.
		Mlms. of marks	Marks	Marks
1876	8,467,076	7,840	928	316
'79	8,390,257	8,080	909	310
'82	9,205,205	8,320	902	310
'85	9,434,864	8,720	923	317
'88	9,915,739	9,360	941	329
'90	10,207,892	10,000	973	342

The totals are subdivided by Dr. Soetbeer thus: He divides the incomes as given by the Treasury into the following six groups:—

Group A	Incomes under 420 marks.
„ B	„ from 420 marks to 1,650 marks.
„ C	„ „ 1,650 „ 4,800 „
„ D	„ „ 4,800 „ 16,800 „
„ E	„ „ 16,800 „ 84,000 „
„ F	„ over 84,000 marks.

To account for the concealments by the taxpayers, the author adds an average of 25 per cent. to the incomes of the first five groups,

³² *Vide* the “Proceedings of the Chamber of Representatives” (8th March, 1892, p. 744). This figure of 34 *milliards* is that which, with an equal population, would correspond to the 210 *milliards* I proposed for France some years ago.

³³ *Vide* the “Bulletin de Statistique du ministère des finances,” October, 1892.

and 10 per cent. in the last group. I proceed now to the results for 1890. In the first place, the classification according to persons is as follows:—

	Number of Incomes.	Ratio per Cent.	Number of Persons.	Ratio per Cent.
Group A	4,094,428	40·11	8,383,359	28·82
„ B	5,517,828	54·05	18,562,145	63·81
„ C	490,541	4·81	1,778,155	6·12
„ D	91,512	0·90	317,193	1·09
„ E	12,521	0·13	43,400	0·16
„ F	1,062		3,681	
Total	10,207,892	100·00	29,087,933	100·00

Classification according to incomes:—

	Total Incomes.	Ratio per Cent.	Average Income.	Average per Head.
	Marks		Marks	Marks
Group A	1,647,000,000	16·6	402	197
„ B	5,110,000,000	51·5	928	276
„ C	1,593,000,000	16·0	3,248	896
„ D	882,000,000	8·9	9,640	2,780
„ E	474,000,000	4·8	37,860	11,028
„ F	219,000,000	2·2	206,788	59,664
Total	9,925,000,000	100·0	973	342

The following table shows the fluctuations in the groups D, E, F, the necessary increases calculated by Dr. Soetbeer being included:—

Years.	GROUP D.		GROUP E.		GROUP F.	
	Incomes between 6,000 and 20,000 Marks.		Incomes between 20,000 and 100,000 Marks.		Incomes over 100,000 Marks.	
	Number.	Total Incomes.	Number.	Total Incomes.	Number.	Total Incomes.
		Mln. marks.		Mln. marks.		Mln. marks.
1876	58,286	560	7,501	286	532	113
'83	71,065	680	8,966	338	639	125
'90	91,512	882	12,521	474	1,062	220

The results of the fiscal reform undertaken by Dr. Miquel, Prussian Minister of Finance,³⁴ are such as to make us believe that Dr. Soetbeer's calculations are not too optimistic. The re-organised income tax gave a surplus (45 million marks) on which the Government had intentionally not reckoned when framing the budget, and of which only a small fraction (10 millions) is due to the taxation of associations (2,028 societies, with a total capital of 4,240 million marks, a total revenue of 332 millions, and an income taxed, *i.e.*, realised in Prussia, of 256 millions). In

³⁴ *Vide* "Bulletin du ministère des finances," Nov.—Dec., 1892.

1892-93, of 30 millions of inhabitants, 21 millions escape the income tax, all incomes under 900 marks being exempt. The incomes taxed are subdivided as follows:—

	Number of Incomes.	Total Incomes Taxed.
		Mln. marks.
Towns	1,410,073	3,872,000
Country	1,025,785	1,852,000
	2,435,858	5,724,000

The following table is worth attention:—

Classification of Incomes Taxed in 1892-93.

Class of Revenue.			Number of Taxpayers.	Amount of the Tax.
				Marks.
From	900 to	3,000 marks	2,118,969	32,835,099
"	3,000 "	4,200 "	136,798	9,126,124
"	4,200 "	6,000 "	77,916	9,624,826
"	6,000 "	8,500 "	45,140	8,505,908
"	8,500 "	10,500 "	17,972	5,013,528
"	10,500 "	14,500 "	17,685	6,518,340
"	14,500 "	21,500 "	13,394	7,019,040
"	21,500 "	28,500 "	5,966	4,414,410
"	28,500 "	36,000 "	3,573	3,512,030
"	36,000 "	48,000 "	2,934	4,030,720
"	48,000 "	60,000 "	1,647	3,071,360
"	60,000 "	72,000 "	973	2,278,000
"	72,000 "	84,000 "	645	1,831,220
"	84,000 "	96,000 "	466	1,602,000
"	96,000 "	120,000 "	562	2,348,000
"	120,000 "	205,000 "	715	4,301,000
"	205,000 "	300,000 "	266	2,579,800
"	300,000 "	600,000 "	164	2,688,200
"	600,000 "	900,000 "	38	1,060,200
"	900,000 "	1,500,000 "	23	1,047,200
"	1,500,000 "	3,000,000 "	8	568,600
"	3,000,000 "	4,020,000 "	1	133,400
"	4,020,000 "	4,980,000 "	1	172,400
"	4,980,000 "	7,000,000 "	2	504,400

Saxony.—According to the "Zeitschrift des K. Sachsischen Statistischen Bureaus, Heft 172, 1889," published at Dresden, the following were the fluctuations in the national revenue taxed since 1879:—

Year.	Number of Taxpayers.	Total Incomes, less Debts.	Average Income per Head.
		Mln. marks.	Marks.
1879.....	1,088,002	959	327
'80.....	1,119,546	982	330
'82.....	1,162,694	1,059	346
'84.....	1,213,188	1,141	362
'86.....	1,267,866	1,237	386
'88.....	1,327,771	1,338	407

The incomes in 1888 are decomposed as follows:—

Class of Income.	Total Incomes.	Ratio per Cent.
	Marks.	
Landed revenue.....	247,000,000	17
Income from funds	168,000,000	12
Salaries and wages.....	584,000,000	40
Commerce and industry	444,000,000	31
Total gross revenue	1,443,000,000	100
Deduct debts	105,000,000	—
Total net revenue	1,338,000,000	—

And the following appears to be the comparative importance of the different social classes:—

	Ratio per Cent.	
	1879.	1880.
Poor (incomes of less than 800 marks)	76.40	71.15
Average (incomes from 800 to 1,600 marks)....	20.95	25.75
Well-to-do (incomes from 1,600 to 9,600 marks)	2.20	2.50
Rich (incomes of more than 9,600 marks).....	0.45	0.60
	100.00	100.00

Scandinavia.—The following are the estimates of MM. Fahlbeck and Falbe-Hansen:—

	Denmark, 1880.	Sweden, 1885.	Norway, 1884.
	Mlms. of frs.		
Monetary stock	88	61	36
Agricultural property, forests	3,360	3,843	1,008
Other real property (houses, factories, mines)	1,568	2,101	700
Ways and means of transport	158	619	46
Farm stock	602	617	182
Agricultural material	196	195	—
Mercantile marine	95	111	140
Merchandise and various personal property	1,652	1,582	700
Total.....	7,719	9,129	2,812
Less liabilities to foreigners.....	—	860	168

The population of these countries at the periods when the above estimates were made were: Denmark, 2,000,000; Sweden 4,682,000, and Norway 1,943,000. The average per head (with-

out deduction for debts) is thus as follows: Denmark 3,860 frs., Sweden 1,950 frs., Norway 1,450 frs.

Austria and Hungary.—In 1880, M. Beer estimated the whole capital of the *Austro-Hungarian* empire at 40,000 million florins, equivalent to 100 *milliards* of francs, supposing the paper florin equal in value to the gold (2 frs. 50 c.). This is, it is true, an augmentation of about a quarter, at the average rate of exchange, and even if we bring the total down to 80 *milliards*, it still appears to me very high. The revenue of Austria-Hungary has been calculated by M. Czoernig to be 8,500 million francs in 1859, and 14 or 15 *milliards* in 1874, by Dr. v. Neumann-Spallart. M. Roschmann-Hoerburg, in 1884, put it at 15 *milliards* of francs (the florin being still supposed equivalent to 2 frs. 50 c.).

For *Austria* alone the real property has been estimated: in 1858, by a Government inquiry, at nearly 15 *milliards* of francs (5,908 million florins); in 1868, by M. Fillunger, at 21,500 million francs (8,572 million florins); in 1884, by M. Roschmann-Hoerburg, at 16,250 millions (6,497 million florins); by Dr. v. Inama-Sternegg, at the same period, at 19,500 millions (7,755 million florins); in 1891, by Dr. Schiff, at 25 *milliards* (10,000 million florins, *i.e.*, 6,500 millions for lands, and 3,200 millions for houses, Dalmatia being excluded). The usual rate of exchange would necessitate a deduction of one-fifth from all these figures. In a very recent treatise Dr. v. Inama-Sternegg, whose statistical works are well known, arrives at the following estimates: total revenue of the Austrian people, 2,400 million florins (nearly 5 *milliards* of francs); capital 30,000 million florins (more than 60,000 million francs).

For *Hungary*, a young statistician, Herr Fellner, has recently adopted the following estimate, which has not been disapproved of by the Royal Hungarian University:—

	Mln. florins.
Landed property and mines.....	6,500
House property	1,100
Ways and means of transport	700
Various convertible securities	2,000
	<hr/>
	10,300
	<hr/>

This valuation, so far as concerns landed property, appears to be a minimum.

Italy.—Signor M. Pantaleoni has published, in the “*Rassegna italiana*” and in the “*Giornale degli Economisti*,” some remarkable studies concerning the importance and variations of wealth in Italy. His method is the same as mine: he multiplies by 36 the total amount of inheritances and donations annually taxed, and thus attains the following reasonable results:—

Period.	Inheritances and Donations.			Average per Head.
	Real.	Personal.	Total.	
	Millions of francs.			
1874-78.....	27,000	17,700	44,700	frs. 1,585
'79-83.....	29,600	19,400	49,000	1,690
'84-89.....	33,100	21,600	54,700	1,764

According to the same author the individual wealth in the different regions may be comparatively estimated as follows:—

	Frs.
Piedmont and Liguria	16
Lombardy	14
Latium.....	13
Tuscany	12
Emilia	10
Venetia	9
Neapolitan Provinces.....	7½
Marches, Umbria	7
Sicily	6½
Sardinia	5
	<hr/> 100

Previously to Signor Pantaleoni, Dr. v. Neumann-Spallart had proposed the following figures: Landed property, 29,000 million francs; house property, 9,000 millions; total *immeubles* 38,000 millions, or 48,000 millions including personal property, which he considered worth 10,000 million francs only. Signor Bodio, Director-General of the Statistics of the Kingdom, reproduces in his memoir, "Di alcuni indici misuratori del movimento economico in Italia," Signor Pantaleoni's calculations, with some interesting notes, and on the whole appears to confirm them.

Greece.—M. Skiadan, head of the bureau of Statistics at the Greek Ministry of Finance, estimates the whole income of the Greeks at 670 million francs, while the private fortunes would amount altogether to 5,000 or 6,000 millions, classified as follows:—

	Mln. frs.
House property	2,672
Lands,	2,090
Forests	252
Government stock	130
Capitals of banks and societies (paid up)	126
Miscellaneous	50
Total.....	<hr/> 5,320

But the forced currency, and the depreciation of the paper money, would here sanction a considerable reduction.

United States of America.³⁵—Under the name of *census*, the United States organise every tenth year a general inventory or universal inquiry, where all the different elements of the national economy find their place. The wealth of the population is there considered in two different forms. On the one hand there is the *assessed valuation*, made with the object of providing a basis for the levy of the tax on capital, and notoriously underrated, especially as regards personal property. On the other hand, there is what they call the *true valuation*, which is purely statistical, and which at all events tends to be a faithful exponent of the truth. The following are the conditions successively ascertained, including the summary results, just published by the Superintendent of the Census of 1890 :—

Years.	Assessed Valuation.	Actual Wealth.	
		Absolute Value.	Value per Head.
	\$	\$	\$
1850.....	—	7,135,780,228	302
'60.....	12,084,560,005	16,159,616,068	514
'70.....	14,178,986,732	30,068,518,507	780
'80.....	16,902,993,543	43,642,000,000	870
'90.....	24,249,589,804	62,610,000,000	1,000

The \$62,600,000,000 in 1890 appear to have been obtained by supposing that the ratio between the *true* and the *assessed* valuation (39 per cent.) remained the same in 1890 as in 1880. This ratio was 47 per cent. in 1870, and 75 per cent. in 1860. The total increase between 1880 and 1890 comes out at 18,968,000,000 dollars, *i.e.*, nearly 45 per cent. During the same interval we find that, for 75 towns alone, the capitals embarked in industry have increased by 1,523,000,000 dollars, that the value of the products has increased by 10,120 million dollars, and that of the salaries by 3,390 millions. The fluctuations in the taxable wealth are very different in different States. Since 1880, there has been a decline in South Carolina, Maryland, Illinois, and especially in Nevada (due to exhaustion of the silver mines). The State of New York (richest of all) gains 42 per cent. (2,640 million dollars in 1880, 3,760 millions in 1890); Pennsylvania, which comes next, gains 54 per cent. (1,680 million dollars in 1880, 2,600 millions in 1890); Massachusetts gains 36 per cent. (1,580 and 2,160 millions), Ohio,

³⁵ *Vide* also G. K. Holmes: "Investigations of Mortgages and Farm and "Home Proprietorship in the United States." "Journal of the Royal Statistical Society," September, 1893, pp. 477—79. [ED. S. J.]

16 per cent. (1,520 and 1,780 millions). A few of the States only recently opened up show most extraordinary gains, North Dakota 792 per cent., and South Dakota 1,041 per cent., for instance.

The distribution of wealth is even more unequal in the United States than in Europe. A tract distributed by the democratic party in the course of the last electoral campaign (but which I quote, only of course, as resting entirely upon the authority of the authors), accuses the protectionist government of having concentrated one-half of the wealth of the Great Republic in the hands of 17,000 individuals, and handed over to 250 capitalists one-twelfth of the total assets of 63 millions of citizens.³⁶

Mexico.—Official statistics, which serve as the basis of taxation, and in which the figures appear to be about one-third below the real value, estimate the landed property in Mexico at 506.6 million piastres (2,500 million francs). In this total, the town property is estimated at 263.4 million piastres, and the rural at 243.2 million.

³⁶ See note on p. 625.

The REACTION in FAVOUR of the CLASSICAL POLITICAL ECONOMY.

ADDRESS to the ECONOMIC SCIENCE and STATISTICAL SECTION of the BRITISH ASSOCIATION, held at NOTTINGHAM, 1893, by PROFESSOR J. S. NICHOLSON, President of the Section.

It may naturally be expected in the address which, as president of this section, I have the honour to deliver, that some attempt should be made at originality, or at any rate at novelty. Accordingly, I hope that I shall fall in with the traditions of my office by defending a series of paradoxes and by running counter to a variety of popular opinions. I will only premise that however paradoxical I may appear, and however much I may seem to strain at singularity, I shall speak always to the best of my ability with the utmost good faith, and I shall endeavour to give only the results of my most deliberate convictions.¹

The central paradox which I propose to defend—the root of the whole series—is that the so-called orthodox or classical political economy, so far from being dead, is in full vigour, and that there is every sign of a marked reaction in favour of its principles and methods. The singularity of my position may be indicated by a word and a phrase. The word is Saturn; the phrase, “we are all Socialists now.” I shall try to show that the traditional English political economy has neither been banished to Saturn nor stifled by socialism, and that in fact it is stronger than ever. This renewed vigour is no doubt largely due to the attacks made upon it on all sides in increasing force for the last twenty years. The dogmatic slumber induced by popular approval has been rudely shattered, and although some of the more timid followers of the orthodox camp thought they had been killed when they were only frightened and awakened, the central positions are more secure than before.

Consider, in the first place, the question of scientific method and the closely allied question of the relation of political economy to allied sciences. The method practically adopted by Adam Smith and Ricardo, and reduced to scientific form by Mill and Cairnes, and quite recently and still more effectively by Dr. Keynes, must still be regarded as fundamental. It has survived and been strengthened

¹ This address may be regarded as in the nature of a preface to my “Principles of Political Economy” (vol. i. London: A. and C. Black, 1893), and I would beg to refer to that work for further elaboration of the arguments.

by two distinct attacks. In the first place the extreme advocates of the historical method attempted to reduce political economy to a branch of history and statistics. They were concerned to pile up facts and add up figures, and they seemed to think that no guiding principles were necessary. But compilations of this kind are, properly speaking, not even history, still less are they political economy. History does not consist simply in collecting facts; the facts must be grouped, arranged, and connected in an orderly manner. A room full of old newspapers is not history, though it may contain much material for history. There was really nothing new in this extreme form of the historical method. It was a reversion to a primitive type. The plan had been adopted by chroniclers time out of mind; they embedded facts, signs, wonders, and traditions, as the mud of a river embeds what happens to fall in it. The facts are the fossils of the historian, and he has to make a very few go a long way. In economic literature we have an example of this method in the "Annals of Commerce" of Anderson and Macpherson. The simple device is to collect all the facts and opinions about commerce all the world over, and arrange them under the year in which they happened. The basis of classification is time pure and simple, and at the best we have an imperfect collection of materials which must be sifted and weighed to be of any service.²

Now compare this method of simple accumulation—this attempt to write a biography of Father Time as a man of business—with the historical method adopted by Adam Smith; at least two-thirds of the "Wealth of Nations" is history, and it is history of the first rank, and it is so because it is history that is introduced for the illustration, confirmation, or qualification, as the case may be, of principles. It does not follow because the principles are fundamental that the facts are warped and distorted; it simply means that the facts are made intelligible. Take, for example, his account of the economic aspects of the feudal system. He brushes

² On the subject of *Method* generally, see *Cossa's* "Introduction to the Study of Political Economy" (new edition, translated by L. Dyer: Macmillan, 1893). For illustration of the extreme historical method, see specially p. 410 *et seq.* "One serious reproach cannot but be made against Schmoller, and that is based upon his denial of any possible use for the deductive method in economics as a science. He bids us patiently wait until we have completed the accumulation of historico-statistical materials dealing with the economic conditions of all times and places; but not all of us can wait so long." *Op. cit.*, p. 414. It is true that some writers, *e.g.*, *Roscher* and *Knies*, and even *Brentano*, have laid much more emphasis in theory than in practice on the historical method, but the central fact remains that the traditional English method was attacked in the way described. In this country the late Professors *Cliffe Leslie* and *Thorold Rogers* may be cited. The "Economic Interpretation of History" by the latter, is full of bitter attacks on the so-called "speculative" political economy.

away the technicalities and looks into the inner life as easily as William the Conqueror at the Council of Salisbury. Or, to take a modern instance, he is like a naturalist who puts aside the parts of the creature he does not want in order that he may see what he does want more clearly. This is a very different matter from suppressing truth and warping facts to suit preconceived opinions. It is needless to say that Adam Smith made some mistakes, *e.g.*, in the treatment of the mercantilists; it ought to be equally needless to say that he made some remarkable discoveries of the processes of economic development. Adam Smith also made large use of the comparative method; he literally ranged from China to Peru in his survey of mankind. What is the underlying assumption in this procedure? It is simply that in economic affairs, in matters of buying and selling in the widest sense of the terms, in satisfying wants by labour, in the accumulation of wealth, there are certain characteristics of human nature that may be regarded as fundamental. These are no doubt subject to modifications by other influences, but modification is not total suppression or eradication. How long would it take the Ethiopian to change his skin under a different climate? And is it not proverbial that human nature is more than skin deep? I think the Ethiopian might become very pale in complexion long before he would learn to prefer low wages to high wages, and much labour to little labour. Economists may learn something from the poets. Why do the creations of the greatest poets live and move? Why do we assent at once to their reality? Simply because they are like ourselves, and we feel with Goethe that we ourselves could commit the same crimes in debasement, and achieve the same glory in exaltation, of spirit. The gods and goddesses, the sylphs and fairies, are only shadows. Can any man read Shakespeare or Homer—to say nothing of undoubted historical records—and deny that a large part of human nature, especially that part with which economists have to deal, is subject to but little variation? Knowledge grows and is handed on from age to age, and the power of man over nature steadily increases, but the feelings are renewed with every generation. The children of the nineteenth century may be precocious and priggish, but they are not nineteen centuries old. Let me remind you, though I am anticipating my argument, that the latest and most advanced scientific economics—that which the Austrian economists have evolved out of the conception of utility—in reality lays more stress than Adam Smith did on the universality of the feelings of mankind. The only difference is that he knew that he was speaking plain prose, and they sometimes think they are only speaking subjective philosophy. In consequence, Adam Smith's

men and women are more real and less uniform than the offspring of the new analysis. But the point of importance is the recognition of certain characteristics of human nature as fundamental; there is no other justification for the use of the comparative and historical methods in the broad manner of Adam Smith.

There are, however, still evidences in recent writers of the influence of that narrow view of history which tries to avoid principles, in order to make an impressionist record of facts. Impressionism may be good art, but it is bad science. Too much stress, for example, is laid on the mere enumeration of statutes and preambles, and too little attention is given to the far more difficult question, How far was the law operative, and how far was the preamble a just description? But signs are not wanting that the broader method of Adam Smith is gaining ground. The work of Mr. Seeböhm on the "English Village Community" is a splendid example, worthy to be placed on a level with the best chapters of the "Wealth of Nations;" and Dr. Cunningham throughout his excellent history has informed facts with principles.

But it is time to observe that the traditional method of English political economy was more recently attacked, or rather warped, in another direction. The hypothetical or deductive side was pushed to an extreme by the adoption of mathematical devices. I have nothing to say against the use of mathematics, provided always that the essential character of mathematics is borne in mind. Mathematics is a formal science that must get its materials from other sciences. It is essentially as formal as formal logic. The mathematician is an architect who must be provided with stones and wood and labour by the contractor. It is one thing to draw a plan, another to erect a building. In economics there are certain relations which are most easily expressed in mathematical form. One of my greatest obligations to Professor Marshall is that when I began the study of political economy at Cambridge some twenty years ago, he advised me to read Cournot. And before going further I should like to say that I think one of the greatest signs of power in Professor Marshall's "Principles" is that he has transferred his mathematical researches and illustrations to appendices and footnotes, and in his preface also he has admirably stated the limits and functions of mathematics in economic reasoning. I also gladly avail myself of this opportunity of expressing my concurrence with the views of Professor Edgeworth in his excellent address on this topic as president of this Section in 1889. But less able mathematicians have had less restraint and less insight; they have mistaken form for substance, and the expansion of a series of hypotheses for the linking together of a series of facts. This appears to me to be especially true of the

mathematical theory of utility. I venture to think that a large part of it will have to be abandoned. It savours too much of the domestic hearth and the desert island. I announced my intention at the beginning of running counter to some popular opinions. I ask for your patience and forbearance when I say that in my opinion the value of the work of Jevons as regards the main body of economic doctrine has been much exaggerated. I am ready to admit that much of his work in finance and currency and in many special problems is excellent. But he was, I think, too deficient in philosophical grasp and intellectual sympathy to give the proper place to a new conception; witness his treatment of Mill and Ricardo. Again, Jevons was not a mathematician of the first rank: he struggles with the differential calculus as a good man struggles with adversity. The older economists maintained that price was the measure, not of utility, but of value, and value could not be reduced simply to utility. Things they said might have a high value in use and but little value in exchange. Jevons, by making the distinction between final and total utility, thought that he had discovered a method by which utility might be measured by price. No doubt, if we make adequate hypotheses, qualifications, and explanations, this may be done; and, in the same way, if we introduce enough cycles and epicycles we may explain or describe the motions of the stars. But price is essentially the expression of objective and not of subjective relations—that is the older view in modern phraseology: the attempt to make a kind of pre-established harmony between the two leads to unreality. Price depends upon demand and supply, and the degree of utility is one element affecting demand. In my view the distinction between final and total utility is of qualitative importance; it is of service in explaining the real advantage of exchange; although the essential character of this advantage has been explained by Adam Smith and his successors. The precision of the new phraseology, especially when translated into curves, gives definiteness and sharpness to the conceptions. The subject is too intricate for more detailed consideration in this place. I will only add that in my view Professor Marshall's criticism of Jevons may be carried much further, with a still further rehabilitation of Ricardo.³

There is another direction in which I think the mathematical economists have wandered far from reality. I allude to the stress laid upon what are called marginal increments. There is a tendency to magnify the effects of the last portion of supply or the last expression of demand. I will only say that this doctrine is

³ For detailed criticism of the measurement of utility by price and of *Consumers' Rent*, see my "Principles of Political Economy" (Book I, chap. iii, and Appendix).

very apt to run into the fallacy which may be popularly described as the tail of the dog fallacy—the idea being that the tail wags the dog and the tip of the tail wags the tail.⁴

To resume in a sentence : the method of the so-called orthodox English economists has only been modified and supplemented, not revolutionised and supplanted, by the historical and mathematical methods of recent writers, and this, in my opinion, is being recognised more and more.

I pass on to consider a closely allied question—the question, namely, of the limitation of the boundaries of the subject-matter of political economy. In my view one of the greatest merits of the orthodox economists was the careful distinction they drew between economic and other social sciences. They refused to merge it in the misty regions of general sociology, and they excluded from its borders the rocks and quicksands as well as the green pastures of ethics and religions. This specialisation, they argued, was necessary if any real advance was to be made beyond the expression of platitudes and sentiments. They allowed that in practical social problems there were in general other considerations besides the purely economic ; but these they left to the jurist, the moralist, or the politician. For a time, however, especially under German influences, attempts were made to break down these boundaries, and the economist was elevated to the position of universal philanthropist and general provider of panaceas. Mill himself was partly to blame for the excursions which he made into the applications of social philosophy to practice. It is to these excursions we are indebted for the fantastical notion of the unearned increment, and the curious idea that it is the duty of people to leave the bulk of their money to the State, or rather the duty of the State to take it. Fortunately, however, for the progress of economics, this ideal of breadth without depth has not become dominant, and any force it had is already spent. The advances made in other social or less vaguely human sciences have been so great that the economist is obliged to exclude them from his domain.

Still to some extent the view prevails, especially in Germany, that it is the business of the economist to discover the general conditions of social well-being, and to show how they may be realised. If such an attempt were seriously made it could only end in the projection of the personality of the writer into an ideal, and one ideal would succeed another like a set of dissolving views. Suppose, for example, that I personally were to attempt to set up

⁴ I do not mean to imply that “marginal increments” are of no value in economics. The criticism is directed against exaggerated stress, not against legitimate use.

an ideal, and, not having imagination enough to create a new one, I were to turn to ancient Greece. There is something very fascinating about the life of the typical Athenian in the best days of Athens. Physical beauty and vigour were considered as essential as keenness of intellect, appreciation of the fine arts, and skill in oratory; and this intense self-realisation was tempered by ardent patriotism and a strong sense of the duties of citizenship. The principal blot, from the modern point of view, was the institution of slavery and the relegation of most industrial functions to slaves. I might as an economist, if this breadth of view were justified, take it on myself to show how modern life might be Hellenised, and by leaving out slavery and introducing a little Christian charity a very pleasing ideal might be made, and then I might go on to show what steps Government should take to realise this ideal.

In the meantime, however, my friend Dr. Cunningham might take as his type one of the equally fascinating religious communities of the Middle Ages, and by leaving out some of the superstitions and inserting a few Hegelian contradictions, he might construct an equally attractive ideal, and proceed to direct the statesman how it might be carried into practice. But when all the other economists had worked out similar projects—Professor Sidgwick, for example, on the lines of Bentham, and Professor Edgeworth with his love of measurements on the lines of Pythagoras—the difficulty would arise, Who was to be the ultimate arbiter? And to this question no one would accept the answer of the rest.

Perhaps it may seem that my illustration goes beyond the argument; let me, then, state the position in general terms. According to the traditional English view it is not the business of the economist to decide all the disputes that may arise even regarding fundamental questions in ethics, religion, fine art, education, public law, administration—to decide, in a word, the first duty of man and the last duty of governments. His sphere is much more limited, and the limits have been indicated with tolerable precision by the classical English economists. Even in England, however, there has been a tendency in recent years to remove the old land marks, and I do not mean simply on the part of socialists, but by those who in the main profess to accept the English traditions.

Just as the German idealists think it is the business of the economist to discover the way to the perfectibility of the species, the English realists impose upon him the duty of finding the road to the greatest happiness of the greatest number. In technical language political economy is the economy of utility.

No doubt, at first sight, this aim seems to be both definite and practical. From the old inquiry, "How nations are made "wealthy," to the new inquiry, "How nations are made happy," it seems a natural and easy transition. For the essence of wealth is to possess utility, to satisfy desires, to create happiness. It is obvious also that the happiness of a people depends largely on its economic conditions in the narrowest sense of the term; it depends, that is to say, on the amount and distribution of its material wealth. Accordingly it seems plausible to maintain that the economist ought to discover by his calculus of utility those principles of production and distribution that will lead to most happiness.

Plausible and natural, however, as this transition from wealth to happiness may seem, it may readily lead to the abandonment of the central position of the classical economists. The steps are worth tracing. The first deduction made from the general principle of utility is that it obeys a law of diminishing return. Every additional portion consumed or acquired of any commodity gives a decreasing satisfaction, and passing through the point of satiety we reach the negative utility of being a nuisance. Illustrated by the usual curve, this law assumes the character of a mathematical axiom.

The next step is to show that the rich man derives very little utility (or happiness) from his superfluity, whilst if his abundance were divided amongst the poor a great amount of happiness would be created. It seems to follow at once that, assuming an average capacity for happiness, the more equal the distribution of wealth the greater will be the happiness of the people. Never did any theory of equality assume such a simple and scientific form; it is like the advent of primitive Christianity in the guise of a new philosophy.

The practical question remains, "How is this ideal to be "carried out?" Obviously it is too much to expect that the principle of natural liberty and the policy of *laissez-faire* may be left to work out this latter day salvation. Competition may be well enough for the strong, but is the destruction of the poor and weak. Accordingly it seems easy to prove, or at least to presume, that great powers must be given to the State. It only remains to bring in the principle which Mill flattered himself was his chief contribution to economic theory, viz., that the distribution of wealth depends entirely on the opinions of mankind, that these opinions are indefinitely pliable, and that, therefore, no schemes of distribution can be called impracticable, and we arrive at the conclusion of the whole matter. And practically that conclusion is nothing less than State Socialism.

It needs no demonstration, however, that nothing could be more opposed to the traditional English political economy. What, then, becomes of my contention that it remains unshaken, and that there are signs of a strong reaction in its favour? The truth is that this conclusion has again brought into prominence other portions of the old doctrine that had been allowed to fall into the background. We are confronted with the limited power of the State and the infinite variety of individual enterprise. To the older economists the difference seemed so great that they considered the presumption against State interference to be established. The rule, it is true, was never absolute and unqualified. Adam Smith himself indicated some of the most important of these exceptions, and the list has been extended by his successors. But these exceptions were all based upon reasoned principles, such as the incapacity of the persons concerned, *e.g.*, children to make fair contracts, the lack of individual interest in public works, *e.g.*, the maintenance of roads, and the importance of the highest security, as in the regulation of the issues of bank notes. And in spite of all these exceptions—strengthened and purified by these exceptions—the presumption remained undisturbed. Recently, however, some writers, under the influence of the ideal of maximum happiness and impressed by the power of the State, have sought to extend its interference far beyond these admitted principles. But I venture to say, so far as this movement had any theoretical support, the reaction has already begun.

The fundamental importance of freedom of contract has become more apparent than ever through the application of the comparative and historical methods to jurisprudence; the proposition that the progress of society has been from status to contract has almost acquired the force of an axiom. The analysis, too, of modern industrial systems in which division of labour has become more and more intricate and interdependent, has shown the hopelessness of the attempt to transfer the management and control to the State. Changes in the methods of production, in the diffusion of knowledge, and in the transport of material commodities, have been so rapid and so great that no executive Government could have overtaken them. In the most advanced communities, even that legislation which is necessary for the new conditions lags behind; even those elementary forms which simply aim at giving an interpretation to contracts in doubtful cases, or which are necessary for the adjustment of responsibility (as in bankruptcy and partnership), are behind the times. The growth of joint stock enterprise has outstripped the development of the law of companies, and there is a crop of new frauds without corresponding penalties.

Turning to the executive and administrative functions of Government, the analysis of existing conditions shows that we have not yet overtaken those exceptions admitted by the strongest supporters of *laissez-faire*. The British Government has, it is true, wasted its energies in devising temporary expedients of various kinds, but it has not yet accomplished the programme of Adam Smith. Not only are there privileges and restrictions that ought to have been abolished long ago, but on the positive side the programme is not complete. We have just begun universal education on the lines laid down by Adam Smith, but his scheme for Imperial federation is not yet within the range of practical politics. We have effected great financial reforms, but we still fall far short of the full development of his principles. Even in matters of currency and banking—in relation to which the function of the State has always been recognised—we are lamentably in need of reform.

But if the State cannot overtake those duties which are so necessary and persistent that they were forced on the attention of the strongest supporters of *laissez-faire*, how can we possibly justify the assumption of new functions which rest upon no better principle than the vague idea that the State ought to do something?

This leads me to observe that not only theoretically but practically signs⁵ of a reaction in favour of the old position are rapidly increasing. The experiments already made at playing the rôle of omnipotence and omniscience, against which Governments were so emphatically warned by Adam Smith, have begun to bring forth fruit after their kind—thorns that were carefully nursed by the legislature, instead of producing grapes, have produced more thorns and worse thorns.

A principle of the widest application in ethics and politics as well as in economics, which may be described as the principle of formal justice, has begun to operate in a remarkable manner. A Government which lends its powers and assistance to one set of people must be prepared to act in a similar manner in all similar cases. If once this principle is abandoned, governmental action becomes either a matter of chance or depends upon clamour

⁵ This is the statement that has evoked most criticism. Many of my critics have said that if there is a reaction it is only in theory and not in practice. But in the *first* place I say only *signs* of a reaction. Had the reaction been in full flood I should have chosen some more novel topic, and *secondly*, I insist that the signs are there. In the *United States*, for example, there is the reaction against the McKinley tariff, pensions and inflation; in Great Britain proposals for land nationalisation, old age pensions, compulsory and universal eight hours' day, have not taken practical shape; judicial rents in Ireland and Scotland are already in arrear, and generally the experiment at double ownership in land is a failure.

and jobbery. It is wonderful how quickly the human mind discovers analogies in grievances, and how soon one cry leads to another. Microbes are not more rapid and relentless in their multiplication. A plain man may have his doubts about the similarity of triangles and consent to arbitration on the question, but he has no doubt that for the purpose of governmental grants and aids his needs are similar to his neighbour's. And the plain man is right. How can we justify the use of State credit for the purchase of lands in Ireland and fishing boats in Scotland, if we are not prepared to give similar aid to the poor of England who are similarly situated? If we grant judicial rents in the country why not in the towns, and if we fix by law one set of prices why not all prices?

We must not be content with looking at the immediate effects of legislation; we must consider also the secondary and more remote consequences. If a legislator thinks that there are none of importance, let him read a chapter of Adam Smith—in the original and not in the stale pemmican of popular dogmatism. And if he still thinks that every law must be considered in isolation on its own merits, that it is a temporary remedy for a passing emergency, then let him resign his seat in Parliament; he has mistaken his vocation; in the name of common sense and the happiness of the greatest number let him cease to be a legislator and become a policeman.

There is an old fable about the gradual entrance, little by little, of the camel into the tent of the Arab. The British Government—I speak irrespectively of parties, for with the frankness of my old masters in political economy I make bold to say both are equally to blame—the British Government is beginning to find that the camel is getting too far into the tent. The admission of a single ear is nothing to the admission of the hump, and the knees and the rest of the beast. Now the ear may be interpreted to mean the grant of a few thousand pounds to Scottish fishers, the hump is universal old-age pensions at a cost of some fifteen or twenty millions a year, and for the knees you may take the nationalisation of land at a cost of some two thousand millions, and for the whole beast you have the complete Socialist programme. The conclusion that when the beast was in the Arab was out needs no interpretation.

Let us leave fables for something the exact opposite, namely taxes. It was a favourite doctrine of the old economist that taxes are a burden and the visits of the taxgatherer are odious. This doctrine also is beginning to reassert itself. The State can do nothing without money, and it generally does things in the most expensive manner. Fortunately in this country we have not yet

reached the limits of tolerable taxation, but at the present rate of growth of Imperial and local expenditure we are rapidly approaching those limits. Now, if there is one position that has been firmly established in theory and confirmed by the abundant experience of many nations, it is that excessive taxation is ruinous to a country. We have to consider not only the net proceeds but the indirect cost in all its forms, not only the mere cost of collection but the effects on industry and on the energies of the people.

It may, of course, be replied that those who demand a large increase of expenditure for public purposes do not propose to tax the poor, but only to take the superfluities of the rich—to take, as it is sometimes said, twenty shillings in the pound from that part of every income which extends above 400*l.* a year. The certain effect of this kind of taxation would be that in a very short time nobody would have more than 400*l.* a year, and the sources of taxation would dry up just as people had become used to and dependent on governmental assistance.

The general argument may be summarised in the favourite phraseology of the day. The utility of every increment of governmental work rapidly diminishes, and the disutility of every increment of taxation rapidly increases. Both propositions, I may add, were abundantly proved before the language I have just employed was invented, and the old language, if less scientific, conveyed a more emphatic condemnation.

I will conclude by calling your attention to one more position of the classical economists, and one that is the foundation of their whole system so far as they deal with the principles of governmental action. They maintain that even if the State could do something for individuals as cheaply and effectively as they could do it for themselves, it is in general better to trust to individual effort. The decisive consideration is the effect on the character and energies of the people. Self-reliance, independence, liberty—these were the old watchwords—not State reliance, dependence, and obedience. In the matter of pauperism, for example, they teach us to distinguish between the immediate effects of relief which may be beneficial and the effects of reliance on that relief which may be disastrous. They are bold enough to maintain that the conditions of life of the dependent pauper should not be made by aids and allowances better than that of the independent labourer. They insist on the great historical distinction between the sturdy rogues and vagabonds—who can work and will not—and the impotent poor, the poor in very deed, who cannot support themselves. They look upon the payment of poor rates as they look upon other forms of taxation—namely, as the lesser of two evils; they do not try to persuade themselves and other people that it is a duty which is

essentially pleasant. And I confess that I never yet met a man who had the audacity to assert that he enjoyed paying poor rates, but I have known many men who have given of their substance to a far greater extent with a cheerful spirit. It is the compulsion that sticks in the throat, and there is no more instructive chapter in economic history than that which describes the slow, painful processes by which Englishmen gradually adopted compulsory assessment for the relief of the poor. I shall be told that these old economic doctrines are cold and hard and opposed to the principles of Christian charity. The retort is easy: If Christian charity realised a tithe of its ideal, there would be no need for relief on the part of the State. If I, too, may quote Scripture for my purpose I would say: Go to the ant, thou sluggard! It does not take ten ants to relieve another ant, and in this land of ours there are more than ten professed Christians to every pauper.

It is time, however, to bring this discourse to an end, and not to begin a sermon; which, moreover, according to my masters the old economists, is beyond our domain. Yet I shall be bold enough to end with these words of advice: To the student I would say: Political economy has a vast literature, and you will not find all the good concentrated in the last marginal increment; you must master the old before you can appreciate the new; a portion of truth just rediscovered for the hundredth time by some amateur is not of such value as a body of doctrines that have been developed for more than a century by economists of repute. And to the legislator I would say: Vaster than the literature of political economy is the economic experience of nations; the lessons to be learned from the multitudinous experiments of the past can never become antiquated, for they have revealed certain broad features of human character that you can no more disregard than the vital functions of the human body. Just as Harvey did not invent but discovered the circulation of the blood, so Adam Smith did not invent but discovered the system of natural liberty. And nothing has been better established than the position that legislation which neglects to take account of the liberties of individuals is foredoomed to failure. If they cannot break through the law they will get behind the law. The first duty of the legislator is to take account of the natural forces with which he must contend, and the classical economists have made a survey and estimate of these forces which, based as it is on the facts of human nature and the experience of nations, it would be wilful folly to overlook.

MISCELLANEA.

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I.—Proceedings of Section F of the British Association.

THE meeting of the British Association held from the 13th to the 20th September, 1893, at Nottingham, was scarcely so large as usual, perhaps partly owing to the counter-attractions of Chicago; and the attendances at the meetings of the Economic Science and Statistics Section were in consequence proportionately reduced. A large audience however assembled to hear the discussion on agricultural depression on the 15th, and the meeting on Monday (18th)—when agriculture was again to the fore—and Tuesday, when the currency was discussed, were also fairly good.

The Officers of the Section were: *President*:—Prof. J. S. Nicholson, D.Sc., F.S.S.; *Vice-Presidents*:—Prof. C. F. Bastable, M.A., F.S.S.; Prof. W. Cunningham, D.D., F.S.S.; Prof. F. Y. Edgeworth, D.C.L., F.S.S.; Hon. Sir C. W. Fremantle, K.C.B.; John B. Martin, M.A., Hon. Sec., S.S.; R. H. Inglis Palgrave, F.R.S., F.S.S.; Prof. H. Sidgwick, D. Litt., F.S.S.; Prof. J. E. Symes, M.A.; *Secretaries*:—Prof. E. C. K. Gonner, M.A., F.S.S. (Recorder); H. de B. Gibbins, M.A.; J. A. H. Green; H. Higgs, LL.B., F.S.S.; and L. L. Price, M.A., F.S.S.

Professor J. S. Nicholson's Opening Address, "The Reaction in favour of Classical Political Economy," was delivered on Thursday, 14th September. It will be found printed in full on p. 627. A vote of thanks for this address was proposed by the Hon. Sir Charles Fremantle (President of the Section in 1892), seconded by Mr. Inglis Palgrave (President in 1883), and carried unanimously.

The Report of the Committee on the "Teaching of Science in Elementary Schools" (Chairman: Dr. J. H. Gladstone) was presented, and taken as read. The principal features in this Report were first the rapid advance in the adoption of "elementary science" as a class subject in these schools; this subject, as well as geography, gaining pupils at the expense of English, which since 1890 is no longer obligatory. The principal subjects taken by the

pupils are algebra and domestic economy, also mechanics and animal physiology. The other most noticeable point is that adults of any age are now recognised as scholars in the "evening continuation schools."

The Committee on the "Methods of Economic Training adopted in this and other countries" (Chairman: Professor W. Cunningham) presented only a temporary report. It was stated by the Secretary, Professor E. C. K. Gonner, that a great deal of information had been collected in foreign countries, but that much of it had been delayed, and that it was therefore not yet ready for publication. Economics were not taught in England to the same extent as in many foreign countries. In the following week this Committee was re-appointed by the Council of the Association, and its grant increased from 5*l.* to 10*l.*

This preliminary business having been disposed of, the Rev. J. O. Bevan read a paper advocating the necessity for "The Better Housing of the Wage-Earning Classes." Mr. Stephen Bourne submitted the "Index numbers" of the value, price, and volume of the principal articles of export and import during the year 1892.

The business of Friday opened with Mr. H. H. Scott's paper on "Agricultural Depression." The author first reviewed the facts, and then discussed the causes, chief among which is foreign competition. Steam, he considers, which has benefited most industries, has almost ruined agriculture, owing to the impetus it has given to transportation. Mr. Scott also pointed to the danger that existed of those agriculturists who possessed any capital abandoning their occupation, and transferring their capital elsewhere—a course that would render the condition of agriculture still more serious. Considering the remedies, he advocated, in the first place, an import tax on foreign barley. The original malt tax, which was so arranged that only barley could be used for beer, on being repealed was replaced by a tax on beer, with the result that other articles from which beer could be made, were placed on an equality with barley. Failing this tax, he would like to see the old malt tax re-imposed. He considered also that the labelling of foreign meat, and the abolition of the remnants of the law of distress, would be of practical use. Other proposed alleviations, such as protection, fruit-farming, dairy-farming, small holdings, reduction of rents, &c., were either illusory or injurious to other interests. Professor Fream opened the discussion, and remarked on the great difference in the price paid to the producer and that paid by the consumer; Mr. Arnold Lupton held that agriculture in this country was quite as profitable as any other industry; Mr. S. Bourne, Mr. Lloyd Baker, Mr. R. M. Barrington, and Mr. George Elliott (representing the Co-operative Union of Leicester) also spoke. Mr. Elliott remarked that the price paid for fat cattle in Leicester was very little below what it was some years since, but that the store cattle was much cheaper.

The next paper was by Mr. Cannan on the "Diminution of the Net Immigration from the rest of the Country into the Great Towns of England and Wales." The figures quoted are extremely

interesting, and we cannot do better than quote in full the abstract furnished by Mr. Cannan at the meeting.

"In London, with the remainder of Middlesex and Surrey and the registration districts of Bromley, Dartford, Gravesend, Romford, and West Ham, the difference between the actual increase of population and the excess of births over deaths was 271,648 in the decade 1851 to 1860, 271,155 from 1861 to 1870, 304,918 from 1871 to 1880, and only 171,442 from 1881 to 1890. For fifteen other great urban districts, with a total population of 6 millions in 1891, the corresponding figures were 253,492, 215,342, 170,726, and 4,261, as shown by the following table:—

"Difference between the Increase of Population and the Excess of Births over Deaths."

Districts.	1851-60.	1861-70.	1871-80.	1881-90.	Population, 1891.
London	+ 271,648	+ 271,155	+ 304,918	+ 171,442	5,935,812
Liverpool	+ 68,703	+ 56,907	+ 49,017	- 15,057	899,985
Manchester.....	+ 32,073	+ 31,754	+ 49,913	+ 17,700	892,494
Oldham	+ 11,444	+ 2,027	+ 22,903	+ 12,297	201,153
Birmingham	+ 40,242	+ 22,220	+ 21,147	- 7,935	631,830
Wolverhampton.....	+ 16,030	- 43,493	- 45,692	- 44,434	540,265
The Potteries	+ 7,890	+ 8,299	- 12,261	- 9,454	242,646
Leeds	+ 11,090	+ 20,734	+ 6,763	+ 15,489	387,044
Bradford.....	- 11,723	+ 32,774	+ 13,712	- 2,069	341,881
Sheffield	+ 26,101	+ 26,647	- 1,868	+ 2,170	342,582
Nottingham	+ 10,962	+ 1,947	+ 33,845	+ 2,445	331,458
Newcastle and Gateshead	+ 17,291	+ 15,439	+ 6,612	+ 27,572	328,066
Sunderland.....	+ 6,787	+ 4,816	+ 5,115	- 5,443	158,793
Hull	+ 3,058	+ 13,310	+ 16,839	+ 7,156	213,689
Bristol.....	+ 1,232	+ 17,505	+ 7,034	- 6,912	326,217
Portsea Island	+ 12,312	+ 4,458	- 2,353	+ 10,736	159,278
Total	+ 525,140	+ 486,497	+ 475,644	+ 175,703	11,933,193

"The net immigration into the towns is affected by migration between the towns and other countries as well as by migration between the towns and the rest of England and Wales. The immigration from Ireland, Scotland, the colonies and foreign countries must have been somewhat less from 1881 to 1890 than from 1871 to 1880, as the number of non-natives residing in England and Wales increased from 1,020,101 to 1,118,617 in the first period, and only from 1,118,617 to 1,119,896 in the second. This decrease of immigration into the country at large cannot possibly account for the whole of the diminution of net immigration into the towns. That the remainder can be accounted for by an increase of emigration from the towns to the colonies and foreign countries is shown to be highly improbable by the fact that the difference between the population of the predominantly urban counties and the number of persons in England and Wales who were born in those counties has not increased between 1881 and 1891, though it increased considerably between 1871 and 1881.

The difference between the population of London with the rest of Middlesex and Surrey, and the natives of that area living in England and Wales, was 933,374 in 1871, 1,061,194 in 1881, and 1,056,401 in 1891. Between the population of Lancashire, Cheshire, Yorkshire, and Durham, and the natives of those counties, the difference was 826,384 in 1871, 1,032,995 in 1881, and 1,031,982 in 1891. In the case of Staffordshire the population outnumbered the natives by 38,233 in 1871 and by 3,660 in 1881, while in 1891 the natives outnumbered the population by 32,100. It seems certain, therefore, that there has been a diminution of net immigration from the rest of the country into the great towns.

"Whether this means a diminution of 'the exodus from the country to the town' depends chiefly on the meaning given to that somewhat indefinite phrase."

The Rev. J. Frome Wilkinson in his paper on "The Poor-Law and Old-Age," pleaded for a bare subsistence, at least, for the aged poor. He adduced figures to show that 1 in about 18 of the population were in receipt of poor relief at some period of life, while of those above 65, this proportion rose to 1 in 3 or 4. Though the wages of the working classes had risen, yet, he contended, the condition of the aged poor had by no means improved. He was in favour of out-door relief, and cited with approval the action of the guardians at Grantham, where a weekly allowance of 5s. 6d. per week was made to men above 75 years of age, 5s. to women above 70, and 9s. to an old married couple living together, the same allowances being granted to those who, although below that age, were disabled. The extras were almost entirely done away with, and the result had been most beneficial.

The next paper was by Professor Edgeworth on the "Statistical Correlation between Social Phenomena." This will be found printed in full on p. 670. Mr. C. Gairdner read a paper on the "Lessons of the Australian Banking Collapse," and Dr. W. Cunningham brought the day's proceedings to a close with "Bishop Hugh Latimer as an Economist," in which he drew attention to the work of the late Miss Lamond in proving that the *Discourse of the Common Weal of this Realm of England* was really written by that Bishop in 1549, and was the original of the *Examination of Common Complaints* by "W.S." in 1581.

No meeting was held in this Section on Saturday. On Monday, the first paper by Mr. J. B. Firth, on "Lace and Fashion," drew a large audience of ladies. Nottingham is still the principal centre of the lace trade, and to this town the author's remarks were chiefly confined. Lace is in fashion, on an average, once in ten years or so, and for three seasons at a time—one in which the trade is increasing, a second in which the fashion is paramount, and a third in which it gradually dies away. In consequence, wages in this trade are very high during three years out of the ten, but many employés are thrown out of work afterwards, and those that are kept on can earn but very poor wages during the remaining seven years.

A second paper on the agricultural depression, by Mr. W. J. Allsebrook, gave rise to a good discussion. After comparing the

general state of agriculture in 1872 and 1892, and pointing out the better condition of labourers, in comparison with agriculturists (owing especially to the fall in prices in food, which of course told against the farmer), Mr. Allsebrook proceeded to consider the means by which their position might be improved. Amongst several other remedies recommended by the author were agricultural education, and the re-imposition of the malt tax. He by no means considered the case of the British farmer to be hopeless, if he were only treated fairly by his landlord. Principal Symes, in opening the discussion, approved of the idea of encouraging education. Mr. Moore, considering especially the eastern counties, said that the landlord was now getting no interest on his money, and recommended that hand labour should be employed as far as possible instead of horses. Mr. Stokes suggested that the declaration of the materials employed in brewing beer should be compulsory, and that additional duty should be paid on materials other than malt. Mr. Macknight held that legislation favoured the landlord. Mr. Stephen Bourne doubted the wisdom of returning to the malt tax.

Miss Heather-Bigg dealt with "Home Work; its Advantages and Disadvantages." Working men objected very much to women earning wages, owing to the extra competition created. But women always have contributed more or less largely to the family earnings: the man's work alone had never been sufficient to keep the family. Much less in the way of making things for family use was now required from the wife than formerly, and in the extra time thus obtained she was bound to earn something to keep the household going. In the course of the discussion Mr. Browne said that in Nottingham the factory stockinger was far better off than the home worker; Mr. A. W. Flux said that statistics he had procured seemed to show that where there was a large employment of women, the men's proportion of the income decreased, and that there was thus no increase in the family income. Mr. J. A. Green remarked that though home work brought down the prices, yet of late many homes would have been broken up without it.

Professor J. A. Strahan's paper on "The Newspaper Press," reviewed the increase in the circulation of newspapers from 1695, when the first daily was started in England, and made several suggestions concerning the legislation on this head. His estimates of the annual circulation at different dates are as follows:—

1712—(Stamp tax on newspapers first imposed)	about	2,000,000
'55—.....	"	7,400,000
'67—.....	"	11,300,000
1801—.....	"	16,000,000
'11—.....	"	25,500,000
'20—.....	"	29,500,000
'31—.....	"	37,700,000
'36—.....	"	39,400,000
'37—(stamp tax reduced from 3¼d. net to 1d.)	"	54,000,000
'41—.....	"	60,000,000
'54—(last year of the stamp tax).....	"	122,000,000
'93—{ 29 London dailies—about 1,000,000,000 }	} at least 2,000,000,000	
170 provincial dailies—at least 1,000,000,000 }		

besides 2,000 weeklies in the United Kingdom. The number of newspapers was 493 in 1840, 1,817 in 1882, and 2,200 in 1893. The census returns give the number of those connected with journalism: "Authors, editors, and writers," as 1,528 in 1861, 2,677 in 1871, and 3,434 in 1881, while the reporters have increased from 636 in 1861 to 2,677 in 1881.¹

Mr. A. de Liégeard gave an account, in French, of the increase of foreigners resident in France, according to the figures of the last census. Mr. W. B. Grant's paper on "Social and Economic Heredity" was taken as read.

On Tuesday, the concluding day for this Section, a discussion on the "Currency Problem" was inaugurated by Professor H. S. Foxwell. He altogether avoided the question of bimetallism, and discussed only the theoretical questions as to the qualities which should be possessed by a standard, and what should be considered as an unit of value. Stability was one of the essential qualities, but a vexed question was, by what is a standard metal's stability to be measured? An unit of labour had been suggested, but it was impossible to define such an unit; and it was now generally held that the prices of wholesale commodities should be considered as stable. The cost of production was an equally fallacious standard, since this depended so much on the ability of the workman. What was required was that commodities should be obtained as cheaply as possible. There were two ways of obtaining this: prices might remain constant while the purchasing power of incomes rose, or the latter might remain steady while prices fell. In the first instance, *i.e.*, when wages increased, affairs were generally prosperous; but in the second case, trade was depressed, there was no improvement in the labourers' condition apparent, and social discontent set in.

Mr. W. E. Dorrington (Secretary of the Bimetallic League) followed with a paper on "The Currency Question practically considered from a Commercial and Financial point of view." He said that the monometallic policy had been the cause of the constant increase in the foreign customs-tariffs, but that its action had been rendered nugatory until 1873 by the bimetallism of France, and adduced statistics to show that the price of commodities in silver using countries had only slightly changed during the past twenty years. He then compared the prices at which the English producer could sell his goods in China, with those at which the Indian and Japanese could sell them. He condemned the action of the Government of India in closing the mints to the free coinage of silver, and stated that England was the only obstacle to International Bimetallism.

The discussion was begun by Mr. Robert Barclay, who maintained that the fall in prices would go on until silver was re-monetised. Mr. E. Cannan thought the fall in prices was exaggerated by bimetallists. Mr. W. H. Grenfell said that what they (the bimetallists) wanted was to return to the state of things which existed before 1873; he did not think that the markets

¹ In 1891 the figures were 5,111 and 2,374 respectively.

would be flooded with silver; and he held that the present state of affairs with the value of gold rising was merely making a present to the creditor, who, when he was paid by the debtor, received a sum more valuable than he had lent. Dr. T. B. Sprague said that nations had agreed that commodities should exchange for a certain amount of gold, whereas bimetallists wanted to fix an artificial ratio between gold and silver, the result of which would be that there would soon be a premium on gold. Professor J. Mavor pointed out that there had been comparative steadiness under the double standard for a hundred years prior to 1874, which had not been maintained since. Mr. J. A. Jacoby considered that to depart from our present system would probably soon land us in bankruptcy. Mr. L. Haslam thought the agriculturist in silver using countries was much better off than in gold using countries. Dr. Mandello (Buda-Pesth) proclaimed himself a mono-metallist. Professor H. Sidgwick and others also spoke.

Although the sitting was continued throughout the usual luncheon hour, the question yet proved so interesting that the Chairman had to curtail the time allotted to each speaker and finally to apply the closure. After Professor Foxwell had replied, Mr. L. L. Price read a paper "On some Objections to Bimetallism viewed in connection with the Report of the Indian Currency Committee." He dealt first with the charge of artificiality brought against bimetallism, and pointed out that many systems were far more complicated. The Indian Currency Committee, in stopping the free coinage of silver, only professed to check the evils occasioned by currency changes, and not to cure them. The Indian analogy also rendered inapplicable the plausible argument that governments should not tamper with the currency. It was not possible, he said, to deny the appreciation of gold and its consequent evils; and the action of the Indian Government was sure to cause a still greater appreciation. Their proposal illustrated some of the dilemmas to which the refusal of bimetallism had brought those who were anxious to relieve by other means the pressure of monetary difficulties.

The last paper, by Mr. F. C. Harrison, was entitled "India and the Currency." Mr. Harrison defended the action of the Indian Government, both on practical and theoretical grounds, and advocated mono-metallism, with an extended use of silver.

The discussion, which was confined to the Indian currency question, was carried on by Messrs. F. J. Faraday, F. P. Fellows, and R. Barclay; and Mr. Harrison replied.

On the motion of Dr. T. B. Sprague, seconded by Mr. F. P. Fellows, a vote of thanks was passed to the President and Officers of the Section.

II.—*Effect of the Fall in Value of Silver on Prices of Commodities in China.*

The following interesting article is taken from the Foreign Office Report No. 305, 1893, by Mr. G. Jamieson, Acting Consul-General, Shanghai. In

reprinting it, however, we think that attention should be called to the erroneous method adopted of totalling the different items in the tables of the Appendix. That these "totals" fluctuate, by no means proves that the whole course of prices has undergone the same fluctuations. The proper method would have been to consider the standard price of each article (say for instance in the years 1870-74) as 100, and by the rule of three, express the price in other years as a fraction of 100 (it may be more or less than 100). These "index-numbers" can then be added together, and the total will give a fair approximation to the truth. The method has been well explained and used by Mr. A. Sauerbeck and Mr. S. Bourne in their numerous contributions to the *Journal of the Society* (see, for instance, the *Journal* for June, 1893, pp. 239 and 240). Fortunately for the author, these tables have scarcely been used in the course of the paper, and his argument is in no way invalidated.

In the following pages I propose to review the general trade between China and foreign countries during the last twenty-three years with a view to showing—

1. To what extent China has been an importer or exporter of the precious metals since 1870.

2. What has been the effect of the fall in the value of silver on prices of—

- (a.) Articles of native origin commonly exported to foreign countries.

- (b.) Articles of native origin commonly produced for consumption in China itself.

3. What has been the effect of the fall of silver in stimulating the volume of exports from China.

Preliminary Observations.

China would seem to be peculiarly well situated for observing phenomena connected with changes in the value of the precious metals. There is a fair stock of both gold and silver in the country. Neither is produced to any extent at the present day within the country itself, but there is perfect freedom of transport to and from foreign countries. There is no legislation in the country giving either metal a preference over the other as a medium of exchange. By common consent silver is so used, not, however, in the form of national coins bearing a certain standard of value, but simply by weight, as one commodity might be exchanged for another. There is nothing to prevent gold being used in payment if the parties so desire, and if so used it would be taken by weight. The relative value of gold and silver changes day by day, and closely follows the exchange on the London market.

The Government of China has not been a borrower in the foreign market to any appreciable extent. Small loans have been contracted from time to time, but at the present moment they are nearly all paid off. There has never, therefore, been any disturbance of values by the sudden augmentation of the stock of the precious metals in the country, and whatever minor effects the temporary borrowing may have had, have been counteracted by the subsequent repayment.

Again, all the conditions regarding mode and cost of produc-

tion of commodities in the interior have remained unchanged. The same methods of agriculture, of manufacture, and of transport are still in vogue as were used not merely twenty years, but one hundred or several hundred years ago. There has been no cheapening of production, as in all western countries, by the introduction of machinery, the substitution of steam for manual labour, or by improved facilities of transport. With the exception of the steamboat service on the coast, the means of transport remain such as they have always been within the memory of man. The facilities provided for the interchange of commodities between the ports open to foreign trade through foreign steamers have doubtless cheapened the productions of one province to the consumers of another, but on the whole it does not appear that the cost of articles at the port of production has been affected thereby.

The foreign trade of China now amounts to a total of some 52,000,000*l.* sterling, being the equivalent at the present rate of exchange of 235,000,000 Haikwan taels. This was composed for last year of imports 27,000,000*l.*, and exports 25,000,000*l.* The trade is thus large enough to allow free play to the adjustment of values through competition with those of the rest of the world.

If, for instance, any article of general demand—say wool, or silk, or cotton—were found to be cheaper in China than elsewhere, competition would at once set in, and buyers would bid against one another until the equilibrium was restored. This result will be the same whether the relative cheapness is caused by a difference in the exchange value of gold and silver or is due to other causes. Say that a sovereign will buy in London at any given time a pound of raw silk, and at the same time exchanges for 6 *dol.* in China, the price of a pound of raw silk in Shanghai will tend to conform to a standard of 6 *dol.*, less duty and costs of transport. If then by a fall in rates of exchange the sovereign will produce 7 *dol.* in China, the price of silk in London remaining constant, the price of silk in Shanghai is 1 *dol.* a pound below the London price. Competition at once sets in, and the price in Shanghai is quickly raised to 7 *dol.* Or suppose, again, that the price of a pound of silk in London falls to 17*s.*, while the gold value of silver falls as before, so that the 17*s.* will produce in China approximately 6 *dol.* The price of silk in China will not be affected, but the price of gold will. Gold, as a commodity, is then 15 per cent. cheaper in China than in London, and foreign buyers will bid against one another so long as any holders can be found willing to sell until equilibrium is restored.

It is thus evident that changes in the relative value of gold and silver arising in Europe will, through the agency of international commerce, immediately have their full effect in the altered purchasing power of the two metals all the world over, and in China no less than elsewhere; and inasmuch as, for the reasons before stated, the problems connected with cost of production which complicate questions of this nature in Europe, and even in India, are here absent, it would seem that China is a very favourable field for observing the effect of the fall in silver on prices generally.

1.—*Balance of Trade in the Foreign Commerce of China.*
Imports and Exports of Bullion.

The first point I wish to examine is the effect of foreign trade on the stock of the precious metals in the country.

Unfortunately, no statistics of the movements of bullion are available until a comparatively recent date. The only agency by which information of this kind could be collected and preserved is the Imperial Maritime Customs. Statistics of the values of imports and exports of merchandise have been published by this department since about the year 1863, and ever since 1870 the returns have been compiled with great care, and may now be accepted as being as accurate as the nature of the case will allow. Unfortunately, however, the import and export of bullion formed an exception. As bullion paid no duty, no permit was required for its being shipped or landed, and consequently no accurate check was possible on the quantities entering or leaving the country. To some extent these drawbacks are still in operation, but a greater desire on the part of the customs authorities to ensure accuracy, and a greater willingness on the part of merchants and bankers to co-operate, have combined to make the returns of bullion published for the last four or five years fairly trustworthy.

The only means, therefore, by which a general notion can be got of the extent to which silver has been entering or leaving the country during the last twenty years is by a comparison of the values of the imports and exports. If these are accurately given they ought either to balance, or, if they do not, the difference must be made up by a corresponding import or export of either gold or silver. China having, as I said, practically paid off the only small loans she ever contracted, there is no national indebtedness on the one side or the other to complicate the account other than that arising from the summing up of the year's transactions.

I propose then to examine the returns published by the Chinese Imperial Customs, with a view of ascertaining on which side the balance of trade lies, and to what extent. These returns, however, require several corrections before they can be used for this purpose. If the annual values of the imports and exports as there given are added together, say for the past twenty years, it will appear as if the imports out-valued the exports by some 2,000,000*l.* per annum, and that, therefore, there has been a constant outflow of the precious metals to that extent. This is by no means the true state of facts, and a few brief explanations are necessary to show what corrections and allowances must be made.

In the first place the values given in these returns are the market values at the port of landing or shipment, as the case may be. A moment's consideration will show that this is not the value at which the one sort of merchandise can be set off against the other, that is the imports against the exports. Take for instance a consignment of Manchester goods arriving from England for sale by a local agent which fetches on the market 10,000 taels. The whole of this sum is not available for remit-

tance to the owner in England. The local agent, before he can put the goods on the market, has had to pay duty and landing charges, perhaps also storage and insurance, and he expects also a commission as seller. He makes up his account thus:—

Description.						Amount.
						Taels.
Paid duty .. .. .	..	..	..	..	..	500
Commission charges .. .. .	..	..	..	..	..	400
Balance to be remitted .. .. .	..	..	..	..	..	9,100
Total .. .. .	..	..	..	..	..	10,000

If his principal has instructed him to invest the proceeds in native produce for shipment to London, instead of remitting, he will take care to purchase only such an amount as will leave him enough in hand to pay the export duty and his commission and charges. His account will then run thus:—

Description.						Amount.
						Taels.
Bought, say 500 piculs tea at 15 taels .. .. .	..	..	..	..	..	7,500
Paid duty at 2.50 taels .. .. .	..	..	..	..	..	1 250
Commission and charges .. .. .	..	..	..	..	..	350
Total .. .. .	..	..	..	..	..	9,100

The transaction is thus closed from an international point of view; there is no balance to be remitted on either side. But it is evident that it would be quite erroneous to represent, as the customs returns do, that the double transaction meant that imports to the value of 10,000 taels had come into the country and exports to the value of 7,500 taels had left. What really took place was an import of the value of 9,100 taels and an export of an identical value.

It will be noticed that I have taken no note of freight outward. This, though usually paid and charged by the exporting agent, does not really enter into the transaction, because if paid by the shipper it has to be remitted by the agent of the vessel to the shipowner; all ocean-going vessels being foreign owned, and so comes to the same thing as if not paid here at all. So I have not allowed anything for importer's profit, but only selling commission, as that is in the long run what meets the local expenditure of the foreign merchants or agents. If they are themselves principals they will call whatever surplus remains over after the transaction is closed, profit, but in so far as this exceeds a commission it will eventually be remitted to the country of the foreign merchant.

The customs returns must therefore be corrected by deducting from the imports and adding to exports duty and charges in each case. The customs authorities have recognised the necessity of

this correction, and have, since 1890, introduced into the returns for each port an amendment purporting to show the true values of imports and exports at the moment of landing and shipment respectively. With the general principle and the reasons given for the correction I entirely agree, but it seems to me that in making the correction an error of fact has been introduced which overstates the values very considerably in favour of China, and leaves the result still untrustworthy. I allude to the percentage which is added to exports and deducted from imports by way of commission and charges.

This is taken for imports at 7 per cent., and for exports at 8 per cent. These figures, so far as I have been able to ascertain, are far too large. The true way to look at the foreign trade of China, which is all done by foreign capital, is to regard it, so far as local charges go, as purely a commission business. What ought to be deducted from market value of imports under this heading is the sum of all local expenditure incurred in carrying on the business, *i.e.*, everything paid locally and spent in the country. So for exports you must add all expenditure accruing to China between the purchase in the market and the point of shipment. This is a matter of fact, which can only be determined by a reference to those that know, and collating all the information that I have been able to gather, I think that 4 per cent. all round is enough to cover everything. This of course is exclusive of duty, the amount of which is known, and on this basis I have made the calculations that follow.

The next point to be noticed is that, previous to 1887, the customs returns did not represent the whole of the foreign trade of China. The proximity of the colony of Hong Kong to the mainland of China enables a large trade to be carried on by native junks, which have for many years imported into the several towns along the southern coast quantities of foreign manufactures, and have conveyed into Hong Kong more or less of native produce destined for foreign consumption, neither of which came within the purview of the Foreign Maritime Customs.

No statistics were obtainable at the native offices, and, Hong Kong being a free port, no information as to the values of junk cargoes was to be procured on that side. Consequently it was impossible to form any accurate sort of estimate as to the amount of this trade, or as to the proportions which the imports bore to the exports. One thing, however, was known, and that was that almost all the Indian opium consumed in Southern China entered by these junks, and not through the foreign customs. This alone made it quite certain that a great deal more in value entered China by this means than came out. It was estimated that from 15,000 to 18,000 chests of opium entered China in this way, which, at an average cost in Hong Kong of 350 taels per chest, made an indebtedness on the part of China, and increased the national bill against her by some 5,000,000 taels to 6,000,000 taels per annum.

In 1887 the control of the junk trade between Hong Kong and the mainland was by international convention placed in the hands of the maritime customs, since which time we have had accurate accounts published of all merchandise passing between Hong Kong

and China in native craft. The first and most conspicuous result of this was that the import of Indian opium into Canton by steamer, which had for many years been merely nominal, suddenly sprang to over 6,000,000 taels in 1888, and has remained since at between 5,000,000 taels and 6,000,000 taels. I find that during the five years 1888 to 1892, the values of the junk cargoes, including such opium as they carry, approximately balance each other. Reasoning backwards, then, from what has been ascertained since the junk trade came under review, I conclude that the value of the foreign imports into China, by way of junk, exceeded the exports by about 5,000,000 taels. This, therefore, is the sum which must be added to the imports into China each year in making up the balance prior to 1887.

A small amount of trade finds its way by junk to other foreign parts, but this can have no appreciable effect on the general result, and it may be said that we have thus accounted for the whole of the sea-borne trade of China. As to what takes place on the western or northern frontier, we have no information, and for the present that must be left out of account.

There are several other items which ought to be noticed if a strictly accurate account is to be taken between China and foreign nations, but I content myself here by merely indicating them without attempting to strike a balance between those that make for and those that make against China. I do so, firstly, because I have no data that can be entirely relied upon; and secondly, because taking a rough estimate, the one set of items may be considered as on the whole a fair set-off against the other.

To the debit of China are the following:—

1. Rents and profits from foreign capital invested in China. The value of land alone within the foreign settlement of Shanghai is estimated at about 20,000,000 taels, and the buildings thereon may be taken as worth half as much. This gives a total of 30,000,000 taels, of which perhaps half is owned by foreigners resident out of the country, mostly, of course, in England. Taking interest on this at 6 per cent. to 7 per cent., we have an annual sum to be remitted of about 1,000,000 taels on this head alone. The like profits from other ports, would, of course, swell this considerably.

Earnings of foreign owned vessels engaged in the coasting trade, so far as divisible abroad, and remittances for purchase of new steamers both foreign and Chinese owned.

Expenditure on Chinese Government account for vessels of war, and for purchase of arms and munitions of war, for machinery for Government arsenals, and for expenses connected with legations and consulates abroad.

And lastly, there are still small annual payments to be made in respect of the interest of unexpired loans. I do not include the principal, as that would merely be a cross entry.

All these items must amount to a very considerable sum per annum, but they are fully balanced by the considerations on the other side, which are:—

1. Disbursements in Chinese ports of foreign owned vessels engaged in the international trade. As no freight is assumed to be

payable in China, an allowance must be made for ships' disbursements, tonnage dues, and repairs while in Chinese waters.

2. Wages and other disbursements of foreign men-of-war serving on China station.

3. Salaries and expenses of foreign legations and consulates in China, as also salaries and expenses of missionaries, no inconsiderable item.

4. And last, there are the earnings and savings of Chinese in foreign ports—San Francisco, Australia, Java, Manila, the Straits Settlements, &c., all of which ultimately find their way to China. This must be a very large item, and one which is probably increasing.

It being, however, impossible, with our present information, to strike any exact balance between these opposing accounts, I leave them to stand against each other.

Allowing for the various corrections and additions in the manner I have indicated, the balance of trade between China and foreign countries presents itself as follows:—

*Table of Imports into, and Exports from, China, during the Years 1865-92, showing Balance for and against China every Year.**

Year.	Value of Imports.	Value of Exports.	Balance in Favour of China.	Balance Against China.
	H. taels.	H. taels.	H. taels.	H. taels.
1865	55,861,000	60,161,000	4,300,000	
1866	66,352,000	56,280,000	..	10,072,000
1867	61,930,000	58,167,000	..	3,763,000
1868	62,595,000	68,691,000	6,096,000	
1869	60,091,000	67,114,000	1,023,000	
1870	62,720,000	61,771,000	..	949,000
1871	68,606,000	74,773,000	6,167,000	
1872	66,096,000	84,139,000	18,043,000	
1873	65,320,000	77,207,000	11,887,000	
1874	63,125,000	74,915,000	11,790,000	
1875	66,344,000	77,308,000	10,964,000	
1876	68,558,000	89,856,000	21,298,000	
1877	71,296,000	75,845,000	4,549,000	
1878	68,952,000	75,661,000	6,709,000	
1879	79,290,000	81,150,000	1,860,000	
1880	76,689,000	87,694,000	11,005,000	
1881	88,432,000	81,179,000	..	7,253,000
1882	75,110,000	76,617,000	1,507,000	
1883	71,400,000	79,163,000	7,763,000	
1884	70,650,000	76,121,000	5,471,000	
1885	84,803,000	73,899,000	..	10,904,000
1886	84,163,000	87,328,000	3,165,000	
1887	94,701,000	95,932,000	1,231,000	
1888	111,662,000	102,596,000	..	9,066,000
1889	99,056,000	107,203,000	8,147,000	
1890	113,082,000	96,695,000	..	16,387,000
1891	118,733,000	111,499,000	..	7,234,000
1892	120,753,000	113,101,000	..	7,652,000

* Values in Haikwan taels, the exchange of which in London varies from 6s. 6d. in 1866-73 to 4s. 4d. in 1892.

The most noticeable features in this table are these:—

1st. From 1865 up to 1870 the imports and exports very nearly balance.

2nd. From 1871 to 1880 there is a uniform balance in favour of China, indicating flow of silver from Europe to China. The total amount of silver thus absorbed would appear to be about 100,000,000 taels, of a sterling value of 30,000,000*l.* The value of the tael fell in those ten years continuously from 6*s.* 8*d.* in 1872, to 5*s.* 8*d.* in 1880.

3rd. During the period from 1881 to 1887, the imports and exports again approximately balance, and from 1888 to date there has been an adverse balance against China, amounting in the aggregate to about 32,000,000 taels, and indicating a corresponding drain of one or other of the precious metals from China. The value of the tael was approximately steady from 1879 to 1884 at 5*s.* 7*d.* From 1884 to 1892 it has fallen continuously from 5*s.* 7*d.* to 4*s.* 4*d.* It is thus impossible to trace any direct relation between the value of the tael and the proportion between imports and exports.

No sufficient data are obtainable for a reliable return of the import and export of treasure so as to check the accuracy of these figures, prior to 1888. Since that year, however, statistics of the movement of bullion and specie between China and foreign countries have been published by the customs authorities, and I present in the following table a summary of the net result:—

Table showing Net Movement of Treasure during the Years 1888-92.

Year.	Imports.		Exports.	
	Gold.	Silver.	Gold.	Silver.
	H. taels.	H. taels.	H. taels.	H. taels.
1888	1,678,000	1,911,000
1889	6,005,000	1,625,000	..
1890	1,783,000	3,557,000
1891	3,693,000	3,113,000
1892	7,332,000	4,825,000

Combining the two tables together from the year 1888, we get the following result:—

Year.	Imports.		Exports.	
	Merchandise.	Treasure.	Merchandise.	Treasure.
	H. taels.	H. taels.	H. taels.	H. taels.
1888 .. .	111,662,000	..	102,596,000	3,589,000
1889 .. .	99,056,000	6,005,000	107,203,000	1,625,000
1890 .. .	113,082,000	..	96,695,000	5,340,000
1891 .. .	118,733,000	..	111,499,000	6,806,000
1892 .. .	120,753,000	..	113,101,000	12,157,000
Total .. .	563,286,000	6,005,000	531,094,000	29,517,000

	Description.	Amount.
		H taels.
Total imports of treasure and merchandise	..	569,291,000
„ exports	..	560,611,000

The small discrepancy between the two sides of the account may, I think, be easily explained by ascribing it to the increased earnings of the crowds of Chinese who now find profitable employment in Singapore, Penang, and the other settlements of the Malayan Peninsula. In speaking of the subordinate matters which enter into the account for and against China, I assumed that they mutually balanced. But it may well be that there is, on the whole, a balance in favour of China arising from the remittances of her emigrants, and that this enters the country as merchandise and not as treasure. As the figures stand, China appears to have got some 8,500,000 taels in the five years more than she has paid for, and the suggestion is that she pays for it in this way, viz., by using the savings of her subjects abroad which would otherwise come as treasure.

It is thus apparent that though the foregoing tables do not accurately balance, they mutually confirm each other, and fully establish two facts:—

1st. That China has taken no silver off the European market for a number of years, and

2nd. That there has been a small but increasing flow of gold from China to Europe.

By the way of further illustrating the movements of the precious metals as between China and foreign countries, I present a summary of an unofficial return which has been furnished me by one of the banks in Hong Kong, showing the imports into and exports from Hong Kong of specie and bullion for the years 1884-92. This return considers Hong Kong as forming one group with China, which indeed for statistical purposes it may be deemed to be, and takes note only of gold or silver coming into Hong Kong from foreign countries, or leaving Hong Kong for foreign countries.

Return of Treasure Entering and Leaving Hong Kong from and to all Places other than China during the Years 1884-92.

Year.				Imports.		Exports.	
				Gold.	Silver.	Gold.	Silver.
				H. taels.	H. taels.	H. taels.	H. taels.
1884	..	..	..	600,000	11,047,000	3,020,000	6,997,000
1885	..	..	..	170,000	8,119,000	5,772,000	10,604,000
1886	..	..	..	695,000	6,912,000	2,620,000	5,100,000
1887	..	..	..	1,235,000	7,659,000	3,870,000	7,742,000
1888	..	..	..	1,175,000	4,653,000	4,289,000	9,915,000
1889	..	..	..	1,045,000	9,305,000	4,099,000	5,236,000
1890	..	..	..	1,323,000	5,385,000	2,927,000	8,212,000
1891	..	..	..	1,027,000	4,814,000	4,075,000	8,775,000
1892	..	..	..	1,583,000	7,960,000	6,140,000	5,483,000
Total	..	..	..	8,853,000	65,854,000	36,812,000	63,064,000

	Value.	
	Currency.	Sterling.
	H. taels.	£
Net export of gold for 9 years ..	27,959,000	..
Equivalent, at average exchange, to .. .. .	..	6,989,000
Net export of silver for 9 years ..	2,210,000	..
Equivalent to .. .. .	..	552,000

This return must not be taken for more than it is intended, viz., a rough estimate of the amount of specie or bullion entering and leaving China by way of Hong Kong. It does not purport to represent the whole movement of the precious metals between China (including Hong Kong) and foreign countries, because a great deal is imported direct into Shanghai both from Europe and America, and it is on this point that statistics are wanting prior to 1888. But taking the return as far as it goes, it does seem to confirm the conclusion already come to, viz., that China has not been, for the last ten years, an importer of silver to any appreciable extent.

This will probably appear surprising to many, and contrary to what might reasonably have been expected in view of the great fall in the price of silver, but the facts seem too strong to admit of any other conclusion. Why it should be so I cannot otherwise explain than by saying that the Chinese are ready and willing customers for our manufactures to the full extent of their means, and even a little over. Their own exports have grown fairly well, as will be seen by a reference to the foregoing table, but their imports have fully kept pace. They invest all the proceeds of what they sell in foreign wares, and they have, in addition, been sending a good deal of gold and a small amount of silver to pay for their purchases.

The amount of gold sent out of the country during the last ten or fifteen years must be considerable, and it is a question of some interest to ascertain where it comes from. A certain quantity is simply a re-export of gold sovereigns brought by returned emigrants from San Francisco and Australia, but the bulk of it is a genuine export of the country itself. So far as we know no gold mines are now worked to any extent within the bounds of China proper. A small amount finds its way down from the Russo-Siberian frontier and from certain gold washings in the Amoor River, but that cannot be much.

The gold for export comes mainly from the private hoards of wealthy Chinese, where it may have been for generations in the shape of bracelets, hair pins, and other ornaments, being tempted out by the unprecedentedly high price now paid for it. There is also a considerable amount of gold in the shape of bars which pass especially in the north as an article of commerce. It is said that

one of the principal uses to which such bars are put is to serve as the medium in which presents are made to high officials. It is well known that provincial officials returning to the capital after a few years' service must conform to time-honoured custom, and an innocent looking flower pot, with a few gold bars under the roots of the plant, is the most acceptable form in which the necessary gratification can be made.

In one form or other a very considerable amount of gold exists in China, and I apprehend that there will be, so long as the present rate of exchange lasts, a continuous export to Europe.

Purchasing Power of Silver.

I now come to the second of the questions I proposed to discuss, viz., the endeavour to ascertain whether the prices of commodities in China have altered during the last twenty years; in other words, whether the purchasing power of silver has varied with the varying exchange.

To illustrate this I have compiled three tables of the prices of commodities, which are hereto appended, and marked A, B, and C.

The first, Table A, comprises articles which are exclusively or principally both produced and consumed in China.

The second, Table B, comprises articles produced in China, but destined for the most part for foreign consumption.

The third, Table C, comprises articles produced abroad but consumed in China.

The prices given in Table A are compiled from customs values, and are, as far as possible, the prices at the ports of production. The prices in Tables B and C are compiled either from customs values or from Chamber of Commerce price lists and other contemporaneous market reports. All three tables are, I believe, as accurate as the nature of the case will allow. At all events they represent beyond dispute the general tendency of prices, spread over a series of years.

An examination of those tables will, I think, establish the following conclusions:—

1. As regards articles which are both produced and consumed in China, silver prices have on the whole tended to decline. There is a moderate rise in a few articles, principally food stuffs, but all over there is a decline of about 9 per cent.

2. As regards articles of native origin exported to foreign countries, the silver price has not advanced with the fall in exchange. Prices, on the whole, are almost exactly on the level of the years 1870 to 1874.

3. As regards articles of foreign manufacture or production imported for sale in China, the average price in silver has declined very considerably.

Chinese can now obtain their supplies at a less cost even in silver than they could twenty years ago by some 26 per cent.

In other words the purchasing power of silver has not declined in respect to any of the classes of commodities, and has even considerably increased in respect of the first and last classes.

The purchasing power of gold, on the other hand—that is its local market value—has steadily advanced with every successive fall in the rates of exchange on London, till now 4s. will purchase what formerly required 6s. 6d., or 60l. will now do what used to require 100l. This is best illustrated by putting the gold and silver prices side by side as follows:—

The several quantities of commodities enumerated in the tables could have been bought as below.

Those in Table A could have been bought—

Year.					Amount.	
					Currency.	Sterling.
					H. taels.	£ s.
In 1873	..	..	..	..	81·56	26 10
1892	..	..	..	..	74·27	16 12

TABLE B.

Year.					Amount.	
					Currency.	Sterling.
					H. taels.	£ s.
In 1873	..	..	..	..	375 06	121 17
1892	..	..	..	..	381·21	83 0

TABLE C.

Year.					Amount.	
					Currency.	Sterling.
					H. taels.	£ s.
In 1873	..	..	..	..	43·09	14 0
1892	..	..	..	..	29·96	6 10

As regards Table A the result arrived at will not appear surprising. The only way, it would seem, in which foreign trade or the fluctuations of foreign exchanges can affect internal prices, *i.e.*, prices of articles which are not in demand for foreign trade, is by drawing away or bringing in one or other of the precious metals. If the result of foreign trade is to cause a flow of silver into or out of the country, the value or the purchasing power of silver will tend to fall or rise as the case may be, and so with gold.

But, as we have seen, there has been no great addition to the stock of silver in China during the period under review, and consequently we ought not to expect a general rise in prices. The fluctuations which we find in the prices of commodities in Table A can indeed be shown to coincide closely with the greater or less supply of silver. From 1870 to 1880 there was a continuous favourable balance of trade, indicating a flow of silver into China.

Accordingly we find there is during this period a tendency of prices to advance. From 1880 onwards there has been no silver coming to China, and as without this extraneous supply the stock in the country is insufficient to meet the growing wants of commerce, the price of commodities tends to fall.

As regards Table B, the conclusions to be drawn from that are more perplexing.

Given an equilibrium of prices at any time between a silver-using and gold-using country, say, between China and England, any subsequent fall in the gold price of silver must, it would seem, have in respect to exports from China one or other of three results. It must either raise the price to the Chinese producer, or it must lower the price to the English consumer, or the difference must remain as profit in the pockets of the middlemen.

The last alternative is of course excluded as a permanent result. The immediate effect of a fall is no doubt to enable the merchant to realise a better profit on merchandise at the time in transit, but competition quickly puts an end to this. As between the other two alternatives one would be disposed to say *à priori* that the larger market would rule, and that the gold price would tend to remain steady, leaving the adjustment to be made at the other side. In that case the silver price in China must rise.

But it does not appear to be so. It is, I believe, a well known fact in the commercial world that it is always much easier to lower prices than to raise them. If you can afford to go down a $\frac{1}{2}d.$ a bargain is much more easily struck than if you are bound to stand out for a rise of $\frac{1}{2}d.$ It would seem then to be a general rule that adjustments following on a fall of exchange are always made along the line of least resistance, and that therefore it is not the China price that rises but the London price that falls. Merchants operating on the usual principles find it easier to buy Asiatic produce at the old prices, and sell it in London at a concession, than to stand out for old prices at home, in order to be able to pay more to the producer.

The experience of the last twenty years shows that with every fall in the gold price of silver there has invariably been a simultaneous lowering in the gold price of commodities in Europe. This has variously been ascribed to the scarcity of gold, or to the greater strain thrown upon existing stocks by its extended use, or to a reduction in the cost of production; but may it not be ascribed principally or entirely to the competition of the produce of silver-using countries? If it is a fact that there has been no general rise in the silver price of produce in India and China and other silver-using countries, or a less rise than the fall in silver

should produce, then the gold price of such produce when imported into Europe must necessarily have fallen with the fall in exchange.

From this point of view it is really silver that rules the world ; it is the purchasing power of the cheaper metal that determines the price all over. Just as in a bi-metallic country the cheaper metal will drive out the dearer towards her mono-metallic neighbours, so, as between countries of different standards, will the prices prevailing in the country of the cheaper metal drag down prices all over to their own level. And, reasoning forward from the experience of the past, it would not perhaps be too rash to conclude that prices of commodities in Europe, so far as these can be drawn in any fair quantity from silver-using countries, must continue to decline with every further fall in silver.

In regard to the third matter of inquiry which I proposed to discuss, viz., how far the fall in silver has stimulated exports from China, an answer has in effect been supplied by the foregoing remarks. There has been a stimulus, but not such a stimulus as might have been expected. The stimulus has been a readiness on the part of foreign merchants to buy native produce of all sorts at current quotations, but not the stimulus which comes from offering higher prices.

Such as it is, however, it has developed the exports very considerably, especially within the last few years. In 1872 the exports of China stood in value approximately as follows :—

Articles.				Value.
				H. taels.
Silk and silk products	..	..	..	26,000,000
Tea, all kinds..	..	..	..	38,000,000
Miscellaneous..	..	..	..	7,000,000

In 1892 the figures were—

Articles.				Value.
				H. taels.
Silk and silk products	..	..	..	38,292,000
Tea, all kinds..	..	..	..	25,983,000
Miscellaneous..	..	..	..	38,308,000

The following table indicates in some detail the particular lines in which the general exports from China have developed. The prices of these articles will be found in Tables A and B.

Articles.	Value.		
	1872.	1880.	1892.
	H. taels.	H. taels.	H. taels.
Silk, raw	23,762,000	23,227,000	27,736,000
„ waste	293,000	947,000	2,603,000
„ piece-goods	2,138,000	3,422,000	6,900,000
Tea, black and green	37,304,000	33,493,000	23,473,000
„ brick	785,000	2,132,000	2,503,000
Peas and beans.. .. .	246,000	160,000	1,187,000
Cotton, raw (for Japan)	394,000	180,000	5,089,000
Hides	17,000	253,000	495,000
Straw braid	84,000	1,227,000	2,056,000
Wool	14,600	30,000	1,545,000
Skins and rugs.. .. .	5,200	152,000	1,315,000
Paper	260,000	512,000	1,572,000
Matting.. .. .	438,000	533,000	1,292,000
Sugar, brown	618,000	2,452,000	1,609,000
Tobacco.. .. .	137,000	168,000	1,074,000

Tea has always figured so prominently as one of the products of China that it could not be omitted from any list of exports, but the causes operating of late years to affect both its price and the volume of the export have been so exceptional that it ought not, perhaps, to be included in a table from which it is sought to draw general conclusions. As will be seen, both the price and the quantity have fallen off very much, owing, of course, to the Indian competition. If tea, *i.e.*, black tea, to which alone these remarks apply, were excluded from Table B, the figures then would indicate a small general rise of prices.

The price of raw silk has shown a tendency to decline, but it has lately recovered, and now stands at about the level of 1873. The average value of China manufactured silk has advanced slightly, and the export has more than trebled.

The prices of straw braid and wool have advanced some 15 per cent. or 16 per cent., with a large increase of export; but, on the other hand, the price of raw cotton, the export of which has grown more than that of anything else, has been steady, and the prices of tobacco, paper, and sugar, all of which show a large growth of export, have all gone down. It may, however, be remarked that these are not exports to Europe, but to silver-using countries such as Japan, Singapore, &c., and so ought rather to be classed with domestic trade.

It is thus difficult to formulate any general rule as to a relation between prices and volume of export, but it may be said that on the whole, leaving tea out of account, there has been a small advance in silver prices of articles sent to gold-using countries, and to this extent there has been a direct stimulus to exports. There seems every reason to expect that this tendency will be greatly enhanced in the near future, in view of the recent action of the Indian Government in fixing the value of the rupee in gold, which

will probably have the double effect of still further depreciating silver and of limiting the silver using area, whence produce can be drawn for the European markets. Whenever silver falls below the normal line of 1s. 4d. for the rupee, Indian produce will, it would seem, be unable to compete on the old terms with that of China. The area of cheaper produce being thus narrowed, it is probable that the price in London will not continue to fall or will not fall so much, and that will necessarily mean enhanced prices in China and an increased export.

It unfortunately happens that, outside of tea and silk, China does not produce many articles that are of universal demand. Her one great industry is agriculture, but agriculture to supply her own wants. The export of rice, wheat and cereals of all kinds, except peas and beans, is absolutely forbidden. If this were otherwise, it is probable that the exports of China might grow very fast, but as things are, I do not look for any very rapid expansion.

It follows therefore, that it is impossible to expect that China will, under present circumstances, become a great consumer of silver.

The conditions of the last few years which have made China an absolute exporter of silver are doubtless abnormal. Under ordinary circumstances China ought to be an importer, but of course she cannot get silver unless she gives value for it in some form or other. Her power of absorbing silver is measured by the difference between the value of her exports and imports, and unless the former out-value the latter, there is nothing left for her to receive. I see no reason to suppose that China will, until things are greatly altered, take the place of India as an absorber of silver.

But the undeveloped capacities of the country are enormous, and if the Government would only allow merchants a free hand in the matter of railways and manufactures, the trade of China might soon outrival that of India. There is probably no country in the world where capital is so much wanted, and where it could be used with greater benefit both to the borrower and the lender.

The amount of silver in the country is, I believe, surprisingly small. Here in Shanghai, which is the commercial metropolis, the stock at any given time, whether in foreign or native hands, seldom exceeds 3,000,000 taels, and is often much less.

At Soochow and Hangchow, and other large inland centres, the estimate is usually much less than that, and in the country at large, and even in populous towns and villages, silver is rarely seen at all. Interest is high—running from 5 per cent. to 12 per cent.—and that not on account of insecurity, but because the borrower can use the capital to such advantage as to make it worth his while to pay it.

Viewing the situation from the Chinaman's point of view, he finds that his tael or ounce of silver is just as valuable to him as it ever was. He can buy the same amount of all the ordinary necessities of life for the same money as formerly, and of foreign articles he can buy a great deal more. If he has things to sell to the foreigner, he can usually get rather a better price than he used

to get, and he finds the foreigner mostly ready to buy, always excepting tea. His wages, rent, and taxes have remained unaltered, as has also the price of land. He can get the same interest on his spare capital if he has any.

The only thing greatly changed is the price which foreigners are willing to pay for gold, and their strong desire to get it. Formerly the price of gold was 15 ounces to 16 ounces weight of silver for one of gold, and there was not much demand for it. Now there is a universal desire to get it and send it out of the country at prices which have gradually risen from 16 taels to 18 taels, 20 taels, 24 taels, and even 30 taels for 1 tael's weight of gold.

Reverting to the questions which I proposed to myself at the outset of this paper, the conclusions may be thus summarised:—

1. China has not been within the memory of the present generation a great absorber of silver. From 1870 to 1880 she did take off about 3,000,000*l.* per annum, but since 1880 this process has ceased, and there has even been of late years a slight export.

2. (a) The fall in the gold price of silver appears to have produced no effect on the general level of prices of articles produced and consumed in China.

(b) As regards articles produced in China and commonly exported to gold-using countries there is a slight tendency to a general rise. This will probably be enhanced in the near future.

3. The fall in the price of silver has stimulated exports by making it possible for foreign merchants to purchase and export at a profit a large variety of miscellaneous articles which formerly would have yielded no return at all. The value of such miscellaneous articles has quadrupled within the last ten years. Tea has declined very largely both in volume and price, but for this there are special reasons. Raw silk of best quality has increased somewhat in volume, but not in price. There has been a great increase in the quantity of waste and refuse silk exported, but the price has somewhat declined.

A continued growth in the exports of China is to be expected, but under present conditions it cannot attain to great dimensions. As the capability of China to absorb silver depends upon the excess of her exports over her imports, there is no reason to expect that China will, within the next few years at all events, take much silver off the European market.

ANNEX A.—Table showing Fluctuations in Prices of Commodities Entering into the Internal Trade of China during the Years 1870-92.

Articles.		Average Values for Years 1870-74.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.
			H. taels.	H. taels.	H. taels.	H. taels.	H. taels.	H. taels.	H. taels.	H. taels.	H. taels.
Cotton, raw	Picul	10.23	10.20	9.01	9.10	10.10	9.95	9.95	9.95	10.75	10.93
Nankeens	"	3.20	4.20	4.20	4.50	4.49	4.51	3.50	3.50	4.00	3.60
Fish, dried	"	5.31	6.50	6.47	7.00	7.50	7.20	7.20	7.20	7.50	6.50
Lily flowers	"	6.66	6.50	6.50	7.00	7.50	7.50	6.00	6.00	7.00	6.00
Rice	"	1.22	1.26	1.25	1.40	1.47	1.46	1.20	1.20	1.20	1.20
Wheat.	"	1.10	1.15	1.75	1.10	1.18	1.18	1.18	1.18	1.20	1.15
Vermicelli	"	3.06	5.00	5.00	5.50	6.00	6.00	6.00	6.00	6.00	4.50
Bean cake	"	0.67	0.67	0.73	0.90	0.78	0.76	0.67	0.64	0.68	0.69
Wood oil	"	5.98	5.60	6.17	6.30	5.86	6.27	6.19	6.53	6.53	6.63
Hemp	"	6.82	7.48	9.18	9.00	8.95	8.43	8.52	2.60	9.31	9.04
Paper, 2nd quality	"	4.62	4.10	4.92	5.00	5.12	4.86	4.55	5.78	4.85	5.25
Tobacco, leaf	"	6.65	5.88	6.24	5.98	6.62	7.20	6.61	5.66	6.06	5.64
Tallow, vegetable	"	8.52	6.67	7.20	8.10	9.54	8.82	7.21	7.29	7.35	7.47
Wax, white	$\frac{1}{10}$ picul.	5.52	4.60	4.70	4.49	4.60	4.90	5.37	5.60	5.40	4.37
Grass cloth	"	2.10	2.26	1.97	2.86	2.86	3.10	3.10	2.84	2.67	2.59
Sugar, brown	"	2.33	2.47	2.08	2.60	2.94	3.25	3.12	2.98	3.11	2.98
Flour, potato	Picul	1.76	1.11	1.19	1.25	1.11	1.25	1.40	1.41	1.40	1.35
Oranges, fresh	"	1.36	1.01	0.94	1.18	0.83	0.76	0.79	0.77	0.84	0.80
Samsu (native spirit)	"	3.47	4.00	8.00	4.00	5.00	4.75	6.06	4.07	3.62	4.00
Glue, cow	$\frac{1}{10}$ picul.	0.98	1.65	1.36	1.33	1.22	1.07	0.88	0.85	0.83	0.85
Total	"	81.56	82.31	95.96	88.59	92.67	93.22	89.49	82.05	90.30	85.54

Table showing Fluctuations in Prices of Commodities Entering into the Internal Trade of China during the Years 1870-92—Contd.

Articles.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
	H. tael.	H. tael.	H. tael.	H. tael.	H. tael.	H. tael.	H. tael.	H. tael.	H. tael.
Cotton, raw ..	11·35	11·50	10·84	10·00	11·00	10·00	10·00	10·80	10·00
Nankeens ..	4·00	4·00	3·94	4·00	4·00	4·00	4·00	4·00	4·00
Fish, dried ..	7·84	7·11	6·65	6·24	6·50	6·42	2·80	4·76	5·00
Lily flowers ..	6·50	5·40	5·00	5·40	5·40	5·40	5·40	4·60	4·50
Rice ..	1·20	1·60	1·80	1·30	1·40	1·40	1·30	1·80	1·50
Wheat ..	1·20	1·20	1·50	1·20	1·20	1·20	1·20	1·45	1·30
Vermicelli ..	5·02	5·00	4·00	4·85	4·85	4·85	4·85	4·10	4·10
Bean cake ..	0·72	0·68	0·81	0·80	0·80	0·89	0·81	0·74	0·76
Wood oil ..	6·30	7·04	6·85	5·62	4·96	4·10	4·83	5·42	5·50
Hemp ..	8·09	7·54	7·63	6·58	6·21	6·70	5·76	5·39	5·80
Paper, 2nd quality ..	5·00	5·87	5·70	5·46	4·66	3·17	3·15	2·63	3·00
Tobacco, leaf ..	5·01	7·18	6·26	5·02	5·01	5·86	4·83	5·94	5·90
Tallow, vegetable ..	6·62	5·86	5·90	5·92	4·96	6·72	6·54	6·19	6·20
Wax, white ..	5·09	4·98	4·85	4·55	4·82	3·32	3·37	2·26	4·30
Grass cloth ..	3·16	3·38	2·20	2·28	2·55	2·52	2·50	2·70	2·50
Sugar, brown ..	2·18	2·40	2·48	2·42	2·40	2·38	2·36	2·36	2·38
Flour, potato ..	1·35	1·36	1·30	1·76	1·76	1·77	1·80	1·78	1·78
Oranges, fresh ..	0·73	0·79	0·89	0·91	0·91	1·14	0·87	0·88	0·90
Samsu (native spirit) ..	5·44	5·98	4·00	4·68	3·02	4·70	5·18	4·74	3·64
Glue, cow ..	0·81	0·86	0·87	0·91	0·94	1·07	0·92	1·09	1·21
Total ..	87·61	89·73	83·47	79·90	77·35	77·61	72·47	74·63	74·27

Articles.	Silk raw, No. 4, Tsatlee .. Silk, wild .. " cocoons .. " refuse .. " piece goods .. Tea, black* .. " green .. " brick .. Cassia lignea .. Peas and beans .. Hide, cow .. Nutmalls .. Camphor .. Rhubarb .. Chinaware .. Strawbraid .. Wool ..	Average Value for Years 1870-74.	1875.		1876.		1877.		1878.		1879.		1880.		1881.		1882.		1883.	
		H. tael.	H. tael.	£ s. d.	H. tael.	£ s. d.	H. tael.	£ s. d.	H. tael.	£ s. d.	H. tael.	£ s. d.	H. tael.	£ s. d.	H. tael.	£ s. d.	H. tael.	£ s. d.	H. tael.	£ s. d.
	$\frac{1}{10}$ picul..	39.60	30.15		31.60		35.10		34.80		36.00		31.50		37.80		35.10		36.90	
	$\frac{1}{10}$ " ..	34.30	54.00		59.20		60.28		48.92		43.41		47.04		48.90		42.15		43.87	
	Picul ..	70.20	78.48		78.76		88.38		58.81		64.35		52.26		65.59		53.94		68.70	
	" ..	50.83	40.50		48.80		35.30		36.30		44.40		50.23		57.34		47.36		56.33	
	$\frac{1}{10}$ picul..	47.50	62.20		67.80		68.60		60.60		65.00		64.60		64.18		57.55		52.04	
	Picul ..	23.03	20.67		21.31		17.49		17.88		18.07		17.64		16.01		16.05		17.01	
	" ..	32.36	23.61		21.47		21.96		19.80		23.52		22.25		21.45		22.87		20.42	
	" ..	8.76	11.48		11.82		11.90		6.97		5.05		9.11		5.93		5.95		6.86	
	" ..	8.02	5.09		5.25		5.91		4.66		5.73		5.82		5.23		4.67		3.88	
	" ..	0.90	0.87		1.06		1.15		0.90		0.93		0.82		0.81		0.87		0.86	
	" ..	7.91	8.80		7.76		7.90		7.89		9.17		12.00		11.78		11.70		11.27	
	" ..	6.05	6.13		7.21		7.15		7.24		7.21		9.76		10.00		9.90		9.15	
	$\frac{1}{10}$ picul ..	6.60	5.30		5.80		6.00		6.05		6.51		8.17		8.54		8.22		8.65	
	Picul ..	9.11	10.70		10.20		9.74		10.25		9.57		8.63		9.02		6.70		7.03	
	" ..	5.00	6.90		3.74		3.62		4.31		3.76		5.05		4.93		4.79		3.71	
	" ..	18.72	21.80		20.00		23.90		22.00		24.07		25.07		27.00		27.00		25.02	
	" ..	6.17	6.21		5.51		7.21		7.00		6.56		6.53		6.49		8.75		8.12	
Total value in silver	..	375.06	392.89		410.29		411.59		354.39		373.31		376.53		401.00		353.57		379.82	
Equivalent in gold		£ s. d.	£ s. d.		£ s. d.		£ s. d.		£ s. d.		£ s. d.		£ s. d.		£ s. d.		£ s. d.		£ s. d.	
at varying ex- change ..	..	121 19 0	121 3 0		122 5 0		123 9 0		105 11 0		105 0 0		109 0 0		111 2 0		102 7 0		106 9 0	
Sight rate of exchange on London per Haikwan tael ..	..	0 6 6	0 6 2		0 5 11½		0 6 0		0 5 11½		0 5 7½		0 5 9½		0 5 6½		0 5 8½		0 5 7½	

* The prices here given are the average of all grades of tea as extracted from customs statistics. If attention were confined to common Congou, prices would show a much greater depreciation.

Table showing Fluctuations in Prices of Commodities Produced in China and Exported to Foreign Countries during 1870-92—Contd.

Articles.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.
Silk, raw, No. 4, Tsatlee ..	H. tael. 31.05	H. tael. 30.15	H. tael. 36.10	H. tael. 34.75	H. tael. 34.20	H. tael. 37.40	H. tael. 35.00	H. tael. 33.50	H. tael. 38.20
" wild ..	" 45.81	" 45.98	" 51.37	" 45.01	" 51.83	" 54.73	" 50.86	" 44.40	" 45.00
" cocoons ..	Picul 45.42	" 45.00	" 65.05	" 56.39	" 56.57	" 55.90	" 74.00	" 58.37	" 64.90
" refuse ..	" 49.40	" 52.60	" 45.50	" 54.30	" 59.35	" 51.50	" 56.60	" 53.77	" 46.58
" piece goods ..	" 50.30	" 44.30	" 62.45	" 53.32	" 53.57	" 53.86	" 51.80	" 52.70	" 52.60
Tea, black* ..	Picul 14.80	" 16.39	" 16.74	" 15.13	" 15.39	" 16.30	" 17.80	" 20.75	" 18.68
" green ..	" 21.75	" 19.41	" 18.41	" 16.49	" 19.52	" 19.10	" 18.60	" 17.15	" 18.50
" brick ..	" 6.05	" 5.40	" 6.14	" 6.98	" 5.95	" 7.18	" 7.20	" 7.08	" 7.46
Cassia lignea ..	" 3.86	" 2.85	" 3.13	" 4.74	" 4.76	" 4.61	" 5.71	" 5.89	" 6.48
Peas and beans ..	" 0.89	" 0.90	" 1.02	" 0.90	" 1.06	" 1.26	" 1.26	" 1.18	" 1.04
Hides, cow ..	" 11.45	" 12.63	" 12.77	" 11.95	" 9.87	" 9.88	" 8.19	" 7.81	" 8.20
Nutgalls ..	" 9.49	" 9.40	" 9.86	" 9.93	" 9.95	" 10.04	" 10.05	" 9.33	" 11.90
Camphor ..	" 7.86	" 9.35	" 11.25	" 9.07	" 8.64	" 8.90	" 15.00	" 15.08	" 17.30
Rhubarb ..	" 9.98	" 9.98	" 9.85	" 9.99	" 9.82	" 8.56	" 9.95	" 9.00	" 7.91
China ware ..	" 2.77	" 3.05	" 2.95	" 4.84	" 2.58	" 2.38	" 2.63	" 3.32	" 4.60
Strawbraid ..	" 25.00	" 24.50	" 25.30	" 24.75	" 24.90	" 23.00	" 25.00	" 20.27	" 23.56
Wool ..	" 7.74	" 7.63	" 9.39	" 8.18	" 8.00	" 9.14	" 8.66	" 8.22	" 8.90
Total trade in silver ..	343.12	339.52	387.28	366.73	375.96	373.68	398.32	367.73	381.21
Equivalent in gold at varying exchange ..	£ s. d. 95 15 0	£ s. d. 89 17 0	£ s. d. 96 16 0	£ s. d. 88 12 0	£ s. d. 88 2 0	£ s. d. 88 6 0	£ s. d. 103 6 0	£ s. d. 90 8 0	£ s. d. 82 12 0
Sight rate of exchange on London per Haikwan tael ..	0 5 7	0 5 3½	0 5 0	0 4 10	0 4 8¼	0 4 8¾	0 5 2½	0 4 11	0 4 4

* The prices here given are the average of all grades of tea as extracted from customs statistics. If attention were confined to common Congon, prices would show a much greater depreciation.

ANNEX C.—Table showing Fluctuations in Prices of Commodities of Foreign Origin Imported for Chinese Consumption during the Years 1870-92.

Articles.		Average Value for Years 1870-74.										1875.		1876.		1877.		1878.		1879.		1880.		1881.		1882.		1883.	
		H. taels.										H. taels.		H. taels.		H. taels.		H. taels.		H. taels.		H. taels.		H. taels.		H. taels.		H. taels.	
Greyshirtings (38½ yds. by 39 ins., 7 lbs. avoird.)	Piece ..	1.48	1.31	1.28	1.12	1.19	1.16	1.15	1.23	1.17	1.10	1.31	1.28	1.12	1.19	1.16	1.15	1.23	1.17	1.10	1.31	1.28	1.12	1.19	1.16	1.15	1.23	1.17	1.10
Drills, English (40 yds. by 30 ins., 14 lbs. to 15 lbs.)	" ..	2.50	2.16	1.98	1.75	1.71	1.80	1.95	1.90	1.80	1.76	2.16	1.98	1.75	1.71	1.80	1.95	1.90	1.80	1.76	2.16	1.98	1.75	1.71	1.80	1.95	1.90	1.80	1.76
T-cloths (medium, 7 lbs.)	" ..	1.36	1.30	1.26	1.17	1.11	1.18	1.14	1.10	1.18	1.08	1.30	1.26	1.17	1.11	1.18	1.14	1.10	1.09	1.08	1.30	1.26	1.17	1.11	1.18	1.14	1.10	1.09	1.08
Drills, American (40 yds. by 30 ins.)	" ..	3.26	3.01	2.70	2.54	2.48	2.49	2.61	2.70	2.49	2.34	3.01	2.70	2.54	2.48	2.49	2.61	2.70	2.70	2.34	3.01	2.70	2.54	2.48	2.49	2.61	2.70	2.70	2.34
Cotton yarn, English..	10 piece..	2.85	2.80	3.00	2.80	2.33	2.40	2.50	2.55	2.40	2.47	2.80	3.00	2.80	2.33	2.40	2.50	2.55	2.56	2.47	2.80	3.00	2.80	2.33	2.40	2.50	2.55	2.56	2.47
Lastings (30 yds. by 31 ins.)	Piece ..	9.62	10.97	9.36	9.18	8.74	8.15	8.20	8.22	8.15	6.48	10.97	9.36	9.18	8.74	8.15	8.20	8.22	5.52	6.48	10.97	9.36	9.18	8.74	8.15	8.20	8.22	5.52	6.48
Iron, nail rod (Dawes' best)	" ..	2.82	2.66	2.34	2.21	1.84	1.87	2.04	1.80	1.87	1.95	2.66	2.34	2.21	1.84	1.87	2.04	1.80	1.96	1.95	2.66	2.34	2.21	1.84	1.87	2.04	1.80	1.96	1.95
Lead, L.B., English ..	" ..	4.66	5.49	6.10	5.18	4.25	4.40	4.17	3.90	4.40	3.37	5.49	6.10	5.18	4.25	4.40	4.17	3.90	3.67	3.37	5.49	6.10	5.18	4.25	4.40	4.17	3.90	3.67	3.37
Tin-plates ..	" ..	5.18	5.50	4.23	4.19	3.60	4.50	4.65	3.60	4.50	3.78	5.50	4.23	4.19	3.60	4.50	4.65	3.60	3.45	3.78	5.50	4.23	4.19	3.60	4.50	4.65	3.60	3.45	3.78
Copper slabs, Japan ..	" ..	4.16	4.17	4.50	4.18	3.56	3.53	3.93	3.76	3.53	3.94	4.17	4.50	4.18	3.56	3.53	3.93	3.76	3.90	3.94	4.17	4.50	4.18	3.56	3.53	3.93	3.90	3.94	3.94
Window-glass ..	Box ..	2.40	2.21	2.35	2.12	1.90	2.01	2.21	2.11	2.01	2.40	2.21	2.35	2.12	1.90	2.01	2.21	2.11	2.36	2.40	2.40	2.21	2.35	2.12	2.01	2.21	2.11	2.36	2.40
Kerosene oil (Devoe's)	Case ..	2.80	1.75	1.60	1.60	1.56	1.45	1.29	1.35	1.45	1.20	1.75	1.60	1.60	1.56	1.45	1.29	1.35	1.24	1.20	1.75	1.60	1.60	1.56	1.45	1.29	1.35	1.24	1.20
Total ..	..	43.09	43.33	40.70	38.04	34.27	34.94	35.84	34.22	34.94	31.87	43.33	40.70	38.04	34.27	34.94	35.84	34.22	31.42	31.87	43.33	40.70	38.04	34.27	34.94	35.84	34.22	31.42	31.87

Table showing Fluctuations in Prices of Commodities of Foreign Origin Imported for Chinese Consumption during 1870-92—Contd.

Articles.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.
	H. taels.	H. taels.	H. taels.	H. taels.	H. taels.	H. taels.	H. taels.	H. taels.	H. taels.
Grey shirtings (38½ yds. by 39 ins., 7 lbs. avoird.)	1.09	1.11	1.06	1.10	1.16	1.13	1.02	0.98	1.01
Drills, English (40 yds. by 30 ins., 14 lbs. to 15 lbs.)	1.86	1.95	1.83	1.81	1.95	1.92	1.88	1.80	1.86
T-cloths (medium, 7 lbs.)	1.07	1.05	1.07	1.16	1.05	1.19	1.05	1.04	1.01
Drills, American (40 yds. by 30 ins.)	2.21	2.25	2.25	2.34	2.43	2.38	2.43	2.43	2.26
Cotton yarn, English	2.30	2.20	2.20	2.40	2.30	2.20	2.00	2.07	2.00
Lastings (30 yds. by 31 ins.)	6.45	6.75	6.30	7.14	6.30	6.97	6.30	6.45	6.50
Iron, nail rod (Dawes' best)	1.92	1.89	1.84	1.77	2.02	2.18	2.16	1.98	2.00
Lead, L.B., English	3.00	3.43	3.84	3.84	4.46	4.08	3.72	3.55	3.46
Tin-plates	3.97	3.51	3.60	3.43	3.61	3.75	3.70	3.10	3.33
Copper slabs, Japan	3.73	3.00	2.82	2.79	4.15	3.40	3.34	3.40	3.40
Window-glass	2.25	2.46	2.12	2.08	2.16	2.25	2.11	2.08	2.10
Kerosene oil (Devoe's)	1.26	1.21	1.07	1.14	1.35	1.42	1.28	1.09	1.03
Total	31.11	30.86	30.00	31.00	32.94	32.87	30.99	29.97	29.96

III.—*Statistical Correlation between Social Phenomena.*

By PROFESSOR F. Y. EDGEWORTH, M.A., D.C.L.

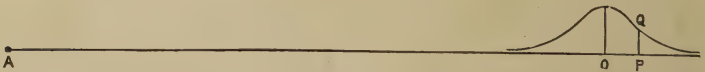
[Read before the British Association, 1893.]

AN example may introduce my subject better than a definition. Let it be required to construct a budget, such as Mr. Higgs lately brought under the notice of the Statistical Society (Journal, June, 1893), representing the expenditure of a typical workman's family upon several articles of food, rent, &c. I propose to indicate a certain condition which must be fulfilled in order that such a type may be constructed, and to make some suggestions as to the best mode of constructing it.

Here, as elsewhere, sociology may derive instruction from the experience of her elder sister, physical science. The case before us is analogous to that which Quetelet treated when he sought to construct a *Mean Man* by measuring the limbs or organs of a great number of men, and taking the mean of the measurements relating to each part as the type of that part. It has been objected to this method that the parts thus determined might not fit each other. Cournot, who heads the objectors, compares the procedure of Quetelet to that of one who, having taken several observations of each angle of a triangle, should put the mean of each set of observations for the value of the corresponding angle. The three angles thus determined might not form two right angles! Similarly the organs determined by Quetelet's method might not fulfil the conditions of joint existence. Your mean man might be a monster, not a model (Cournot, *Théorie des Chances*). Cournot is followed by many eminent statisticians, in particular Morselli, *Annali di Statistica*, 1880, *Metodo in Antropologia*, p. 26, and Westergaard, *Theorie der Statistik*, p. 189.

It is with great diffidence that I venture to differ slightly from such high authorities; by submitting that their objection, though valid in the abstract, is much weakened by a circumstance which prevails in *rerum naturâ*, the fulfilment of the law of error. I need not remind students of statistics that very generally the members of a species, *e.g.*, men or shrimps, range with respect to any measurable attribute, such as the length of an organ, under a curve of which the equation is of the form $y = Ke^{-ax^2}$, and the general appearance is that of Fig. 1 annexed. AO being the average

FIG. 1.

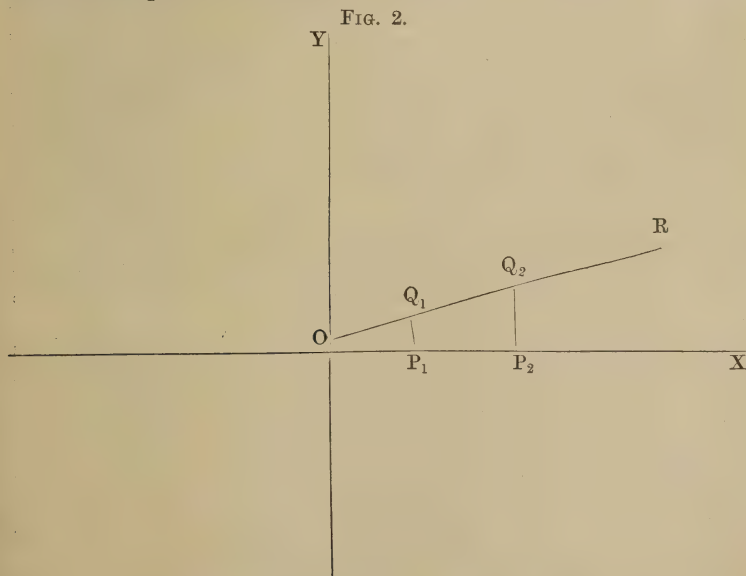


length of the organ, the frequency with which an organ deviating from the average by OP—which we may call x —occurs, is proportionate to the ordinate at the point x , viz., PQ, or y . I have in a former volume of this Journal dwelt on the properties of this curve (*Jubilee Volume*, 1885). I have now to introduce a more general law of error, expressing the frequency of the concurrence between two, or more, attributes. The frequency which in the

case of a single variable is proportioned to the constant e ($2.7 \dots$) raised to the power $-ax^2$ (see the equation above written) is in the case of the two variables proportioned to the same constant raised to the power $-[ax^2 - 2hxy + by^2]$; where x and y are the deviations of two organs or attributes—say stature and length of cubit—from the respective means, and a, h, b , are constants pertaining to the species. If, as in a former paper,² we compare the curve of error to the outline of a *gendarme's* hat, we may now compare the surface of error to the top of a “pot” or “billicock” hat.

It is wonderful how accurately this double law of error is fulfilled in the case of animal organisms, as shown by the observations of Mr. Galton on men (Royal Society, 1888), and those of Professor Weldon on shrimps (*Ib.*, 1892); and the calculations performed on these materials, at the suggestion of the present writer (*Philosophical Magazine*, 1892, August and December; 1893, January and June).

There is one property of the error-surface which should be noticed here as interesting both in itself, and as a test of the fulfilment of the law. To x , any particular deviation from the mean value of one organ, corresponds, as being most frequently in the long run of specimens associated therewith a value, y , of the correlated organ which has a constant proportion to x . For instance, for the correlation of human male stature to length of cubit, the ratio is 2.5 to one; men whose cubits are longer (or shorter) than the average cubit by one inch or two, will on an average exceed (or fall short of) the average stature by 2.5 or by 5 inches. There exists a mathematical, as well as an artistic, proportion between the parts of the human frame.



² *Journal of the Royal Statistical Society*, 1888, p. 599, 1890, p. 460.

2 Y 2

This property is illustrated by Fig. 2. P_1, P_2 , being any points on the axis of x , if planes be drawn through them perpendicular to that axis, the highest points of the curves traced out on these planes by their intersection with the error-surface will lie on a plane perpendicular to the plane of xy , and passing through a certain straight line OR.

A case of this proposition, which particularly concerns us, is when $x = 0$. In that case the average, which is also the greatest ordinate or centre of greatest frequency, for one attribute corresponds to or, is in the long run most frequently associated with, the average, or greatest ordinate value, of the other attribute. Our hat has one rounded summit; it is not puckered up into irregular projections like the soft felt hats now sometimes worn.

Here is the answer to the Cournot-Westergaard objection that the average value of one organ may be inapt to coexist with the average value of the other organ. The exact contrary proves to be true. Considering the average of one organ, we see that the value of the other organ which most frequently in experience—most probably in expectation—is associated with the average of that one is the average of the other.

These propositions may be transferred from animal to social organisms; in virtue of the presumption that the compound law of error prevails in the latter, as well as in the former, department. This presumption is based upon these two premises: (1) The compound, as well as the simple, law of error is apt to be fulfilled by phenomena which depend upon a variety of independent elements or agencies (as argued by the present writer, *Philosophical Magazine*, November, 1892). (2) Social phenomena are largely of this character; as is shown, (α) generally by the constancy of statistics, a constancy which seems best explained by the play of an immense number of influences whose fluctuations compensate each other; (β) in particular by the prevalence of the simple law of error in social phenomena (*e.g.*, marks at examinations, *Journal of the Statistical Society*, *loc. cit.*), which can hardly be accounted for otherwise than by such a comminution of agencies as would equally tend to fulfil the compound law (γ) by actual verification in the particular case of correlation between the marks in Greek and Latin at the India Civil Service Examinations for 1874 and 1875—Candidates who are above or below the average mark in Greek prove to be above or below the Latin average to about the extent which the theory predicts.

An *à priori* answer is thus derived from the theory of errors to the *à priori* objection against the determination of a type such as Mr. Higgs and others are constructing. I cannot think it is an unimportant result to reconcile the theory of Cournot and Westergaard with the practice of common sense.

But, besides this negative result, the theory suggests some positive directions as to the method of determining the type. First, as to the battle of the means—whether the greatest ordinate should be preferred to the familiar average—*cadit quæstio*, in so far as the two means coincide, the symmetrical law of error prevailing.

No doubt in acting upon this presumption—as generally in applying mathematical ideas to social phenomena—regard must be had to the degree of irregularity which may be expected in the subject matter. One abnormality which often characterises a group of quantities which cannot sink below zero, but may rise ever so high, is an elongation of the upper limits of the theoretically symmetrical curve of error.³ I have noticed this incident in the fluctuation of prices (*Report of the British Association*, 1887, p. 284). Something similar may be apprehended in the case of expenditures.

So far as the arithmetic mean is by this elongation pulled up above the greatest ordinate, there may be some ground for preferring the latter species of mean. But it should be considered (*a*) that even in the case supposed the greatest ordinate or “most probable” value is not necessarily the “most advantageous” mean, that one value which may with least detriment be put as representative of the whole group (see *Philosophical Magazine*, 1883); (*β*) even where the greatest ordinate is theoretically the best mean, it is apt to be practically indeterminate where the number of observations is few (see *Journal of the Royal Statistical Society*, 1888, p. 358, and *Report of British Association*, 1889, p. 157). Having regard to these theoretical and practical considerations, I should recommend sometimes employing the median for reasons elsewhere stated (see the passages just referred to).

The preceding remarks relate to the ordinary or “extensive” method of statistics which Mr. Higgs in the paper referred to distinguishes from the “intensive” method recommended by Leplay. This method is thus clearly described by Mr. Higgs (*op. cit.*, p. 261): It “consisted in selecting a typical working class family and describing it minutely.” “The ideal family for this purpose is that represented by the greatest ordinate mean . . . , the family which has the greatest number of other families similar to it in the field of choice.” In the selection of the family to be observed, it was “Le Play’s custom”—a custom honoured in the observance according to Mr. Higgs—to “seek the advice of some local authority.”

This method is quite consonant to the theory of errors. “The local authority” may be likened to an instrument presumed *à priori* to be more likely than others to give an observation nearer the true mean than others. It is scientific to prefer one observation made with such an instrument to the mean of many observations made with inferior instruments. At the same time one would like to confirm the *à priori* presumption by observing *à posteriori* how far the observations made with the superior instruments present the characteristic of accuracy, namely consistency.

But, as already observed, we must not expect ideal regularity in social phenomena. The instance of marks in Latin and Greek

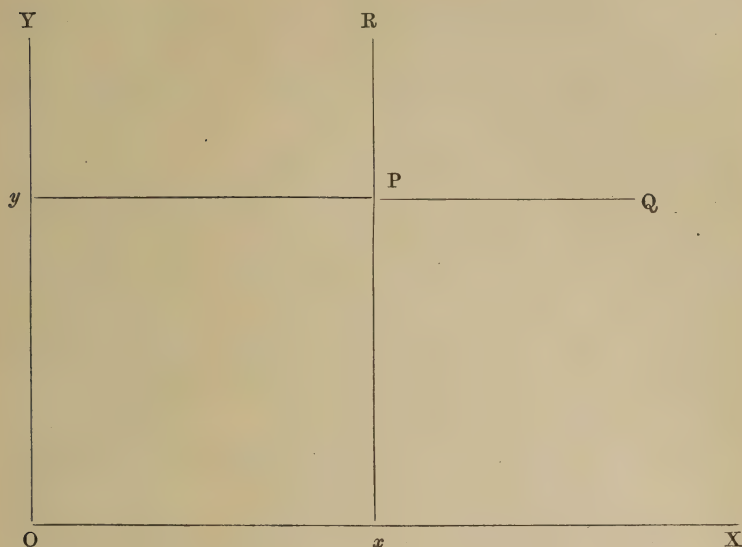
³ The explanation of this anomaly is probably to be found in the brilliant contribution which Prof. Karl Pearson has recently made to the theory of errors in a paper read before the Royal Society. See the abstract of this paper given below at p. 675.

which I have referred to is not so perfect as that which animal organisms present; and we must often be content if the calculus supplies a mere regulative idea. Thus in dealing with Professor Marshall's difficult conception of a representative firm (*Principles of Economics*, *passim*), the law of error would probably not be very helpful. Yet even with respect to the less statistical portions of Political Economy it is useful to have understood what a type is at its best.

Again, with respect to the co-relations dealt with by Dr. Francis Warner in the March number of this Journal, it may seem doubtful whether we should be content with the general idea, or may aspire to a more precise calculation, which I will endeavour to indicate, though I cannot hope to make it quite clear to those who have not studied the mathematical theory of co-relation. If we may regard the "defects" observed by Dr. Warner, "defective development," "abnormal nerve signs, &c.," as each corresponding to the extreme values, the higher percentiles, of a certain attribute, say development, condition of nerves, &c., then our data will be of the following character. Put x for deviation from the average development, measured in units of the probable error pertaining to this attribute; on the principle explained by Mr. Galton (*Proceedings of the Royal Society*, 1888), or rather in units of the modulus as recommended by the present writer (*Philosophical Magazine*, August, 1892). From Dr. Warner's data (*loc. cit.*, pp. 70—73) we have out of 26,884 boys observed, 3,616 with "defective development;" a percentage of 13.4. Now a percentage, or percentile, 13.4 corresponds to an excess above the average, measured in units of modulus, of almost 0.8; as is found from the table of the definite integrals of the error-function (given in the article on Probability in the *Encyclopædia Britannica*, eighth and ninth editions, and in most treatises on probabilities). By parity, the proportion of boys with abnormal nerve signs being 12.6 (*loc. cit.*, p. 74), we may regard the boys so affected as having a condition of nerves in excess of the average by more than $0.8 \times$ modulus pertaining to this attribute. A further datum is that of the "defectively developed" boys, 54.6 presented "nerve signs" (*loc. cit.*, p. 73); in our symbols, of the specimens deviating from the average by more than 0.8 (\times modulus for x) 54.6 deviated from the average by more than 0.8 (\times modulus for y). In the accompanying figure the plane of x, y is represented by that of the paper, above which is imagined to rise the pot-hat-shaped surface of probability. OX being taken equal to a little less, and OY a little more, than 0.8, our datum is that planes erected perpendicular to the paper on the lines PQ, PR, intercept above PQ and to the right of PR, a portion of the solid which is half 0.546 of the portion similarly intercepted by planes through xX and xR . Now if there were given a certain constant which may be called the coefficient of correlation (Mr. Galton's r , *loc. cit.*) between the two attributes, we could deduce *à priori* (given Ox and Oy) the proportion 0.546. For instance, if $r = 0$ (the attributes being independent) the ratio in question would be the same as that between the portion of the

solid intercepted by yY and yQ and that intercepted by OY and OX , that is half 12·6 per cent. If $r = 1$ (the correlation being

FIG. 4.



as close as possible) the proportion is 100 per cent. Conversely, from our data we may determine the coefficient r ; from which result we might reason down to conclusions of this sort. Defining the *very* (or the *slightly*) defective in development by some percentile higher (or lower) than our original one ($100 - 13\cdot4$); and similarly defining the *very* (or the *slightly*) imperfect in nervous condition by a percentile higher (or lower), we could calculate the proportion of the *very* (or *slightly*) imperfect in development who are *very* (or *slightly*) imperfect in nervous condition. But the computations involved would be extremely tedious, and it may be doubted whether the statistical material is strong enough to bear so severe a strain of reasoning.

IV.—*Contributions to the Mathematical Theory of Evolution.* By KARL PEARSON, M.A., Professor of Applied Mathematics, University College, London.

[Abstract of a Paper read before the Royal Society, 1893.]

1. If a series of measurements, physical, biological, anthropological, or economical, not of the same object, but of a group of objects of the same type or family, be made, and a curve be constructed by plotting up the number of times the measurements

fall within a given small unit of range to the range, this curve may be termed a *frequency curve*. As a rule this frequency curve takes the well known form of the curve of errors, and such a curve may be termed a *normal frequency curve*. The latter curve is symmetrical about its maximum ordinate. Occasionally, however, frequency curves do not take the normal form, and are then generally, but not necessarily, asymmetrical. Such abnormal curves arise particularly in biological measurements; they have been found by Professor Weldon, for the measurements of a certain organ in crabs, by Mr. W. Thompson, for prawns, by Mr. Bateson, for earwigs. They occur, however, in physics, *e.g.*, Dr. Venn's barometric and thermometric frequency curves; in anthropology, *e.g.*, Signor Perozzo's curves for Italian recruits, and Dr. C. Roberts' curves for the eyesight of Marlborough College boys and in fever mortality statistics; in economics, Mr. Edgeworth's curves of prices, and curves I have had drawn for rates of interest.

Frequency curves may, however, be abnormal and yet symmetrical. These are much more likely to deceive even the trained statistician; such curves might arise in target practice, and would be due, for example, to firing with equal precision, *but with a change of sighting* at mid-firing.

2. Abnormal frequency curves fall into three distinct classes:

- a. Asymmetrical curves best represented by a point-binomial, or by its limit a continuous curve.
- b. Asymmetrical curves which are the resultant of two or more normal curves, with different positions of axes, different areas, and different *standard deviations*—a term used in the memoir for what corresponds in frequency curves to the error of mean square.
- c. Symmetrical abnormal curves, which are compounded of two or more normal curves having coincident axes but different areas and standard deviations, or of two normal curves with the same areas and standard deviations but different axes.

3. Let a be the area of any frequency curve, let the vertical through its centroid, or the line through its centroid perpendicular to the axis of measurement be drawn, and let the second, third, fourth, fifth, and sixth moments about this centroid-vertical, $a\mu_2, a\mu_3, a\mu_4, a\mu_5$, and $a\mu_6$, be ascertained. This can be done by graphical or arithmetical processes indicated in the memoir, tables being given to assist the calculation in the latter case. Then we can treat the three classes of abnormal curves in the following manner:—

4. *Class a.*—Let the binomial corresponding to the curve be: $a(p + q)^n$, where p = probability in favour of an isolated event, q = probability against, and n = number of contributory "causes" in a single trial. For example: the simultaneous spinning of n teetotums with black and white sides proportional respectively to p and q , and a the total number of times the group of n is spun. Then it is easy to fit this point-binomial to a frequency curve of which the centroid vertical and μ_1, μ_2, μ_3 , and μ_4 are known. The solution for this case is not discussed in the memoir, having been already dealt with by the author.

If it be desired to draw a continuous curve corresponding to the asymmetrical curve, we can proceed as follows: Imagine n to be large, but the ratio q/p either small or large; then we can obtain a *generalised form* of the normal curve of an asymmetrical character; its equation referred to the centroid vertical is:—

$$y = \frac{a}{\sqrt{(2\pi\mu_2)}} \left\{ \frac{\sqrt{(2\pi\beta)} \beta^\beta e^{-\beta}}{\Gamma(\beta+1)} \right\} \left(1 + \frac{\mu_3}{2\mu_2^2} x \right)^{\beta-1} e^{-\frac{2\mu_2}{\mu_3} x},$$

where β stands for $4\mu_2^3/\mu_3^2$ and $\Gamma(\beta)$ is the Eulerian gamma function.⁴ Putting $\mu_3 = 0$ for an asymmetrical curve, the equation takes an indeterminate form obtained by putting $\beta = \infty$, but on evaluation we have the usual normal form:—

$$y = \frac{a}{\sqrt{(2\pi\mu_2)}} e^{-\frac{x^2}{2\mu_2}}$$

This generalised probability curve fits with a high degree of accuracy a number of measurements and observations hitherto not reduced to theoretical treatment, *e.g.*, barometric frequency curves.

The importance of this first dissection of asymmetrical frequency curves lies in the fact that it measures the theoretical number n of contributory “causes” and the odds $p:q$ that an element of deviation will be *positive*. The whole theory is, however, of an elementary character, and, as biological frequency curves often tend to develop a double-humped character,⁵ they do not invariably fall under this class, and it is not dealt with at length in this memoir.

5. *Class b.*—The general theory of the dissection of a given abnormal frequency curve into m components is not dealt with, partly on account of its exceedingly great analytical difficulties, partly because there is an *à priori* probability that we have a mixture of only two homogeneous groups, or from the standpoint of evolution that the species will break up at first into two, rather than three or more, families. At any rate, the dissection into two is likely to give us either the chief components or a measure of the chief asymmetry of the curve. Supposing the curve asymmetrical, it is shown that the solution of the problem is theoretically unique, but it is pointed out that in statistical practice our curve is based upon a limited number of measurements, and is therefore not an accurately true compound of two normal groups. A theoretical test is given to distinguish between the better of two or more solutions. The method adopted for the dissection is based on equality of the first five moments and of the areas of the abnormal curve and of its two components. This method is justified in the same manner as the determination of the normal curve by fitting any series of observations by aid of the area and the first two moments (*i.e.*, the first moment gives the

⁴ If β be large, it may be taken as approximately whole, and the factor in round brackets is then unity.

⁵ *E.g.*, claspers of earwigs, height of Italian recruits of various special provinces, short sight of Marlborough boys, height of inhabitants of Doubs, &c.

mean, and the second the error of mean square) is justified. The method leads to what is termed the *fundamental nonic*, every root of which gives a real or imaginary solution of the problem. The best solution is selected by the criterion that it gives the closest approach to the given frequency curve in the value of the sixth moment. From the nonic is deduced a quadratic for the areas of the components corresponding to each solution. If both roots of this quadratic are real and positive, we have either a mixture of two heterogeneous species, or evolution is breaking the homogeneous material up into two families of different magnitudes, different means, and different standard deviations from the mean. If one root of the quadratic be real and positive, and the other real and negative, we have evolution destroying a certain percentage round a certain mean out of an initially homogeneous and normal group.

Should one of the standard deviations be imaginary, we get the percentage of anomalous and irregular measurements in a homogeneous group.

6. *Class c.*—The solution here is unique, and depends upon the equality of the areas and of the first *six* moments; for all odd moments vanish, and we have four quantities to determine, *i.e.*, the percentages of each group and their standard deviations. The solution depends on a quadratic for the areas, and the same remarks apply as to the quadratic for Class *b*.

7. Rules are given for detecting whether we have a mixture of two groups, or whether a differentiation into species of a homogeneous material is going on; and also rules for measuring the amount of asymmetry which is to be considered significant. The former rules are, briefly:—

- i. Select the most asymmetrical curve out of the curves for the organs measured; dissect it into two curves or groups by the method for Class *b*.
- ii. Select the most symmetrical curve out of the curves for the organs measured and dissect it into two groups by the method for Class *c*, or, if it have significant asymmetry, by the method for Class *b* again. Then (*a*), if the first dissection is possible and the second is not, a real evolution is going on; (*β*) if the first dissection is possible and the second is possible, and both groups give sensibly the same percentages, we have a mixture of two heterogeneous materials and no true evolution, unless the organs be so closely allied that one must vary directly with the other (*e.g.*, length of right and left legs); (*γ*), both dissections are possible, but give groups with different percentages; we have *both* organs evolving differently at the same time.

8. The theory is applied to Professor Weldon's measurements on Naples crabs. It is shown that his material is absolutely homogeneous, all roots of the nonic for No. 4 organ leading to imaginary solutions, even its real root. On the other hand, it is shown that the Naples crabs are breaking up into two different sized families, owing to evolution in their foreheads. The theory is further applied to Mr. Thompson's measurements of the carapace of prawns

(1,000 measurements). It is shown that we have in the measurements a very small percentage of anomalous results, corresponding to prawns deformed in this organ, or that there is, on the other hand, a small but unstable giant population mixed with the normal population. Which of these results is to be considered the true answer to the problem can only be determined after an analysis of the frequency curves for other organs.

From the mathematical standpoint, the memoir illustrates the determination of the roots of equations of the ninth degree, and the calculation of the higher moments of curves.

V.—*Alien Immigration.*

NOTE on the *Reports to the Board of Trade on Alien Immigration.* (London: Eyre and Spottiswoode, 1893.)

This volume contains two reports prepared for the Board of Trade by Mr. Burnett and Mr. Schloss respectively on the important subject of alien immigration into the United States. The reports are based upon personal inquiries instituted during a visit to America in the spring of this year. They furnish a full and accurate statement of the provisions of the laws and the condition of public opinion; and they will be useful in correcting, or giving precision to, certain vague popular impressions, which have obtained currency on the attitude of American opinion towards alien immigration and the extent to which practical effect has been given to this disposition. The general result of the investigation seems to show that, although certain measures, which are effectual, are taken to prevent the entrance into the States of obviously undesirable aliens, and also to facilitate the speedy movement to their destination in the country of immigrants who otherwise might linger or remain permanently in the towns, the number of such immigrants detained, arrested in their journey, or sent back to their point of departure, is very small compared with the great volume of immigration; and that, while a body of opinion has been forming in favour of imposing restrictions, the scope of its intentions, and the degree to which it would desire to give serious practical effect to them, are both more limited than has been sometimes imagined of late on this side of the Atlantic. The subjects, into which Mr. Burnett and Mr. Schloss were commissioned by the Board of Trade to inquire, were divided in such a way that the latter directed his investigations more particularly into the laws and their administration, and the former into the nature and economic effects of that "portion of the immigration" which was "of the character of the recent influx of destitute foreigners from the eastern parts of Europe into England."

Mr. Schloss in the first instance furnishes a statement of the actual laws restricting immigration generally, and then gives an account of what he terms the "sifting" process, as it is carried out in practical pursuance of those laws. This consists of two

main stages, one prior to, and upon, the embarkation of immigrants at the port of departure, and the other on their arrival in the States. He describes with some minuteness the process as observed at New York, Baltimore, Boston, and Philadelphia. He adds some observations on the temporary restriction of immigration through quarantine from September, 1892, to February, 1893, and on the methods prescribed by that immigration law of 1893, which was adopted by the House of Representatives just before his arrival. These are followed by a brief account of the restriction of immigration on the land frontiers and of the laws for the exclusion of the Chinese, and Mr. Schloss concludes his report with some general conclusions "as to the efficiency attained in the application of restrictive measures in the United States." In these conclusions he distinguishes between the laws designed to exclude the members of a specific race like the Chinese, and those intended to discriminate between different classes of persons without respect to nation or race. With regard to the latter a staff of some 165 persons in all, exclusive of medical officers, is specially employed in the work, and some 60,000*l.* is annually spent upon it. Immigrants are excluded on moral grounds, on grounds of public health and comfort, and on economic grounds. Those falling under the first class are convicts and polygamists, those under the second comprise persons suffering from loathsome or dangerous contagious diseases and violent lunatics, while economic grounds may prevent the immigration of persons unlikely to be self-supporting or under contract to labour. With regard to the first of these two last classes the sole question considered is whether the immigrant is likely to become a public burden, and not whether he is able to support himself. He need not himself be possessed of means; he need only satisfy the officers that he is not likely to become a pauper, and, if this be probable, he will be sent back, whatever his means. The object of the laws against the importation of contract labour is apparently strictly limited. The laws are designed to protect the American working man from the competition of aliens induced to come by a promise of work made by employers. Foreign labour is freely employed, but it must not have entered the States in consequence of a promise held out before its arrival.

Of the enforcement of the laws thus described, Mr. Schloss quotes from the Superintendent of Immigration an express declaration that, so far as immigration by land is concerned, the legislative provisions for regulating and restricting it along the southern and northern borders have been "practically inoperative." As to transoceanic immigration he observes that "speaking generally, the examination of intending immigrants at the time when they take their tickets, as carried out hitherto, has possessed a certain, probably not very high, degree of value as a means of weeding out from the crowd of applicants those whom the laws of the United States declare inadmissible." He adds that the recent statute of 1893 is likely to make steam agents more careful than hitherto. The scrutiny, again, of the medical officers before, or on, embarkation is necessarily not very searching

as it is rather hurried. The figures once more furnished with reference to the results of the sifting process on the American side of the ocean show that, out of a total of some half million immigrants arriving at the different ports in the States during the year ending the 30th June, 1892, 2,164 were prevented from landing as inadmissible. 4 of these were rejected as idiots, 17 as insane, 1,002 as paupers, 80 as diseased, 26 as convicts, 23 as "assisted immigrants," 80 as prostitutes, and 932 as contract labourers. 637 persons, who had been allowed to land, but within one year had become a public charge, were deported from the States. The sifting machinery can, he urges, scarcely be considered effectual in eliminating all convicts and polygamists. The medical inspection is at the best of course far from infallible, but, within its necessary limitations, it is tolerably effective. The rejection on economic grounds, lastly, is, from the exigencies of the time and opportunities permitted by rapid inspection of a number of individuals, of a very rough and ready character; but the period of a year, during which the immigrant, if he becomes a public charge, may be sent back, affords a considerable means of correcting error; and, with respect to contract labour, it must not be forgotten that the vigilance of the trade union reinforces the energy and ability of the inspector. With regard to the exclusion of Chinese this seems to be effectual by sea but not wholly by land, and some Chinese of course come in with the full cognisance of the authorities on the ostensible ground that they are not labourers. Mr. Schloss adds to his report a number of appendices containing statistical tables, and one of the most interesting of these appendices consists of a collection of opinions on the points at issue gathered from eminent economists, such as General Walker, Professors Mayo Smith, Taussig, and others.

Mr. Burnett in his report deals with a more limited, but equally interesting and instructive, aspect of the question. He furnishes a number of tables showing the volume and the racial character of the general immigration into the States. For he maintains that the part of the immigration, which he was especially directed to study, cannot be understood, or its importance appreciated, without paying some previous attention to the whole of which it forms "by no means the largest proportion." "It has only begun to assume considerable dimensions in comparatively recent years, and its nature and effects have therefore been largely influenced by the conditions previously existing and created by other and preponderant classes of immigrants." The figures recording the total volume of immigration from 1820 to 1890 by decades show a gradual growth during the first few, while the last exhibits an immense increase upon the growth of any corresponding period. The total volume for the ten years ending with 1890 was 5,246,613, and the annual average 524,661. Europeans supplied 88 per cent. of the whole, and, of all other nations, Great Britain and Ireland, taken together, "have been the largest contributors to the population of the United States." In 1850 the Germans commenced to come in vast numbers, but up to 1870 the English-speaking peoples supplied a majority of immigrants. Shortly after the

Germans came the Scandinavians, and then, in gradually increasing force, the inhabitants of Italy, Russia, and Austria-Hungary. It is these latter classes which constitute the undesirable elements of the immigration. They do not readily assimilate with native-born Americans, they belong preponderantly to the male sex (the percentages of females in the cases of Italians and Hungarians in 1892 being only 20.6 and 26.2 respectively), and they excite the opposition of native labour leaders because they introduce a low standard of living. It is especially the Jews from Russia who form the subject of Mr. Burnett's investigations, and he shows that similar conditions of employment for long hours at low pay in unhealthy surroundings have accompanied their immigration into the States to those which are familiar on this side of the Atlantic in connection with the sweating system. Practically, Mr. Burnett remarks, "all the Russian immigration is Hebrew." "They neither came voluntarily, nor possessed the capacity" of Jews who arrived in the States in the past. They were driven out by a process which only permitted the fittest to survive and remain in their old homes. They are not physically strong, they are unfitted for general employment, and they tend to congregate in the cities in a small number of trades, such as the clothing industries, and the cigar manufacture. Attempts have been made to deal with the difficulties arising by factory legislation and official inspection, and by organised voluntary effort on the part of the wealthy Jews themselves, and notably by Baron Hirsch. The Jews do not, however, it is true, appear in a specially unfavourable position in statistics of pauperism and crime. Mr. Burnett appends to his examination of their condition some remarks upon labour opinion generally on the subject of immigration; and he arrives at the conclusion that, while on the one hand it is "certain that, in the opinion of a large number of American people, there has been in recent years a considerable influx of undesirable immigrants into the country," "it is equally clear that no definite popular movement for the further restriction, suspension, or prohibition of alien immigration has yet taken shape." An Appendix to his report contains various statistical tables, together with a list of works bearing on the subject.

VI.—*Notes on Economical and Statistical Works.*

Principles of Political Economy. By J. Shield Nicholson. Vol. I. London: Adam and Charles Black, 1893.

Within the last ten years two notable books on the principles of economics have appeared in England, which have exercised, it is no exaggeration to say, an immense influence. And now to the treatises of Professors Sidgwick and Marshall the volume before us may be added. It forms no unworthy successor; and, in affirming our belief that it is likely to take such a position, we are bestowing, as the author himself would be the first to admit, no

small or common measure of praise. We think, however, that there is room for all the three treatises, and Professor Nicholson's is remarkable for independence of treatment. He acknowledges his obligations to his forerunners; but he makes no attempt to conceal the points on which he differs from them, and some at least of those points are of considerable importance. His book occupies, if we may say so, a kind of middle position between the older treatises and these newer contributions. Proceeding himself upon the lines of Mill's *Principles*, he follows the traditional division of the subject, and he does not approve of the method adopted by Professor Sidgwick and Professor Marshall of considering distribution as a branch of exchange. He maintains that there is as much logical reason for treating distribution separately and antecedently as there is for treating production, and that, viewed from a historical standpoint, exchange comes late in the progress of nations as a method of distribution, and should not be assumed at the outset. We ourselves do not think his conclusions valid, or believe that he accords sufficient recognition to the importance of that establishment of the theory of value as a central doctrine, imparting unity to the whole, which is to be found in some recent works. It appears to us that he has gone backwards rather than forwards, but he has undoubtedly by so doing brought his treatise nearer to that of Mill.

On the other hand, it must be said that he manifests no slavish adherence to Mill's opinions, and he considers the subject in the light of the most recent knowledge, although he carries his agreement with the main outlines of Mill's treatise so far as to adopt with some exceptions the same headings for the separate chapters. Much of his criticism of Mill is as acute and discriminating as it is fresh and suggestive. The powerful influence exercised on Mill's mind by the fear of overpopulation is shown to have distorted his judgment of the future, and to have blinded him to inconsistencies in his own argument; and the distinction, which he was so careful to draw, between the necessary character of the laws of production and the optional voluntary nature of those of distribution, was, Professor Nicholson maintains, like the dread of population, based on inadequate data, and has occasioned some crude illusions and mischievous errors in the minds of others, if not in that of Mill himself. It has suggested that the arrangements and organisation of society as respects distribution can be taken to pieces and put together again with comparative ease and safety. Professor Nicholson himself has little sympathy—less indeed than Mill seems to have entertained, and less perhaps than is felt by Professors Marshall or Sidgwick—for any scheme which would reorganise society on a socialistic or semi-socialistic basis. In this respect indeed his book may be regarded as representing a reaction, and it possesses in consequence the vigour and attractiveness, but also, it may be, on occasions the bias, of a partisan pamphlet. He may perhaps be accused of laying excessive stress on the advantages and necessity of freedom as the basis of economic welfare; although it is true that, if he seems in this to be reactionary, the reaction may be wholesome, if not opportune. In this insistence

on freedom, however, he follows, as he maintains, in the steps of Adam Smith; and he believes that he himself owes more to that great writer even than to Mill, upon the lines of whose treatise he has constructed his own. He considers Adam Smith to be far more of a historian, and accordingly his own book chiefly differs from that of Mill by incorporating a larger quantity of economic history. We believe that this change will commend itself to many of his readers, and that it finds justification, as he urges, in the prominent position taken of recent years by investigations of a historical character. Unfortunately even now, as this very treatise shows, there seems to be abundant room for dispute on some of those historical questions, which have been most persistently examined; and the student of economic history appears more likely to be bewildered by the extent of the area to be covered, and the difficulty of reaching certain results, than to be encouraged by the amount and quality of the conclusions which have been already attained by the most painstaking and able inquirers.

By following on Mill's traditional lines Professor Nicholson recommends his book to the student, who has already gained a familiarity with the subject, and will find here that he can easily combine with his existing knowledge the additions and modifications effected by later research. This seems to us to be the most advantageous consequence of adherence to an established arrangement; and we fully admit that only considerable reasons can justify a change. Those reasons, we think, exist, and we therefore believe it possible that Professor Nicholson's book may come to be regarded as standing half way between the elementary treatises, to which the student is first introduced, and what, we imagine, may appear, at any rate on the first perusal, the difficult reasoning of the treatises of Professors Marshall and Sidgwick. In drawing this distinction, however, we must guard ourselves against misapprehension. We hope that Professor Nicholson will see his way, as soon at any rate as he has completed his work in a second volume, to make an abridgment for the use of elementary students; and we believe that such an abridgment would command a large circulation. But, even as the book stands, his style is so luminous that the elementary student can hardly experience any serious difficulty in attempting to master it; and he is likely to be deterred more by the necessary length of the treatise than by other considerations. Even in this respect Professor Nicholson has effected a wise economy of space by dismissing with brevity obsolete controversies, which had no doubt their interest in their day, and still possess historical importance, but often turn on verbal distinctions which later inquiry has brushed aside. In some places, no doubt, his treatment is somewhat abrupt, and exhibits traces of the growth of the treatise, as he states in his preface, out of lecture notes. On these grounds then it appears to be more suited for advanced than for elementary students, and, like some other recent treatises, to presuppose some measure of knowledge on the part of the reader. But the lucidity of the style in which it is written prevents it from being so difficult as those other treatises, and it may therefore, we imagine, form a fitting

introduction to them. On this side also, however, it must be said that the student, who has already read Professors Marshall or Sidgwick, cannot afford to neglect Professor Nicholson. For he has always something fresh to say on the topics which severally present themselves in a treatise on Principles, and he differs from his predecessors, as we have seen, on some important points. For these differences he presents reasons, which, if they do not always carry conviction, are ably stated and merit the most careful attention. His treatise accordingly forms an addition to our economic literature as important as it is welcome, and we can but regret that at present it is only a first instalment. We hope that it may not for long remain so, but be joined by its companion second volume.

A History of the Theories of Production and Distribution in English Political Economy from 1776 to 1848. By Edwin Cannan. London: Percival and Co., 1893.

Mr. Cannan's aim in writing this book is described in his preface. "My object," he states, "is simply to show what the various theories concerning production and distribution were, and to explain how and why they grew up, and then either flourished or decayed." He commences his inquiry with the *Wealth of Nations*, and he ends it with Mill's *Principles*, and he adopts these limits—the first, because "the framework of the theories of production and distribution which have been taught in English economic works for the last hundred years appears to owe its origin entirely to that peculiar combination of indigenous economics with the system of Quesnay which is to be found in" Adam Smith, and the latter, "because it is yet too early to treat in an historical spirit the twenty-five years which have elapsed since 1868, and the period of stagnation which followed the publication of Mill's work is not a profitable subject of study except in connection with the outburst of new ideas which ended it." Within these limits Mr. Cannan conducts a minute inquiry into the origin and development of the various theories, dealing in successive chapters with the classification of the wealth of a nation, with the idea of production, with the different requisites of production—labour, capital, and land—with the idea of distribution, which he distinguishes into pseudo-distribution, concerned, not with the absolute shares of wages, profits and rent, but the proportional rates of wages per head, of profits per cent., and of rent per acre, and distribution proper; and, in a concluding chapter, he shows the relation of the theories examined to the practical politics of their day. Throughout the whole book he is specially careful to furnish full quotations and exact references.

In executing the task he has set before himself he has exhibited considerable industry and acumen. He has accomplished a valuable piece of work; for what he urges in his preface about the "creation of a mythical Ricardo and Malthus, who never wrote anything which cannot be 'limited and explained,' till it ceases to be in conflict either with recognised fact or accepted modern opinion," although expressed with extravagance of language, has

a basis of fact; and his book may well exercise a wholesome influence on any who are inclined to exaggerate the merits of the older economists. But we are bound to add that Mr. Cannan himself does not approach his subject with entire freedom from bias, although his bias may be in an opposite direction. It is, we feel convinced, impossible to avoid gathering an impression from the general tone of the book, as well as from some observations by the way, which might perhaps have been omitted without disadvantage, that Mr. Cannan is not displeased to detect inconsistencies and errors, and that he is disposed by nature to be a severe rather than a generous critic. We doubt whether any writer on any subject could successfully stand the test of so minute a verbal criticism as Mr. Cannan applies; and we are rather surprised than otherwise that the pioneers of a comparatively new branch of study should have emerged from the ordeal without sustaining more harm than that to which they have been exposed. Mr. Cannan seems to us to be in danger of not seeing the wood for the trees, and we do not believe that the verdict he has pronounced will be accepted as the final verdict on the work of the writers he criticises. For his method of minute examination, and his insistence on small errors, or verbal slips which, sometimes, we must confess, he seems to enlarge into hopeless confusion of thought, or even deliberate misrepresentation, appear to us to need correction, or at least supplement, by a broad view of an author's work as a whole, and a generous recognition of his contributions to the development of the study in which he has been engaged. The one method, like the other, may have its dangers, but we do not think that Mr. Cannan's method taken alone can result in a just or adequate judgment. By taking a sentence here and a sentence there, which, with all Mr. Cannan's conscientiousness in the matter of the accuracy and fulness of his quotations, and his extensive and exact knowledge of his authorities, is necessarily the method which characterises a large portion of his work, it is only too possible to misapprehend an author's meaning, to exaggerate unduly his failings, and depreciate unjustly his merits; and for this reason minute criticism may, we believe, yield as inadequate results as broad generalisation. To attain the right balance between the two is, no doubt, immensely difficult; but we are convinced that this is the goal at which the just commentator should aim, and we do not think that Mr. Cannan has consciously placed such an object before him, or that he has succeeded in realising it. We cannot therefore regard him as an impartial critic.

None the less his work appears to us to be of no little value. And at the end of his book he seems inclined to pass a more tolerant judgment upon the shortcomings, which he has relentlessly, and, we may be allowed to add, with apparent pleasure and some triumph, exposed in his earlier pages. We think, indeed, that, when he sums up his examination with the remark that, "judged by what we may call the 'abstract method,' the theories of production and distribution arrived at in the first half of the nineteenth century must be visited with almost unqualified con-

demnation," his language is exaggerated, if not erroneous, and that, so far as his criticism is correct, he has committed the unfairness of applying to the infant the standard of the full-grown man, while the ordinary biographer would rather seek to detect in childhood the germs of what afterwards might come to maturity. But he proceeds at once to indicate the practical circumstances amongst which these theories germinated and developed; and here he seems to us to be both just and acute. It is, as he observes, a delusion to believe that the "economics of the Ricardian school were of an almost wholly abstract and unpractical character." On the contrary they bore an intimate relation to practical controversies of the day, and they exercised a wholesome influence upon the determination of some of those controversies. We think that the spirit of these observations, if followed out, might furnish the corrective to what we are compelled to regard as the shortcomings of Mr. Cannan's examination, and they might suggest to him, or at least to his readers, that, mingled with references to contemporary practical exigencies, which may have contributed to mar the consistency of an author, and to leave him open to the assaults of a criticism which sometimes seems to amount to hyper-criticism, and to be largely concerned with the verbal expression of thought, there may be the germs of later and more exact theories, and that gratitude is due to those who have been the first to express, however imperfectly, what may stimulate and guide subsequent inquirers to more certain conclusions. We have searched in vain in Mr. Cannan's book for any such gratitude, and we regret its absence from so able and learned a work. We wish that some small measure of the undoubted ingenuity he has displayed in unearthing and exposing failings and inconsistencies had been bestowed on the endeavour, which he might be equally competent to carry out with success, to exhibit and appraise merit. For surely the best interests of a study are advanced by criticism, which, if candid, tries at all hazards to avoid the suspicion of carping, and is as anxious to amend as it is to upset the conclusions of previous writers.

An Introduction to the Study of Political Economy. By Luigi Cossa. Translated by Louis Dyer. London: Macmillan and Co., 1893.

In a former number of this *Journal* we noticed the new Italian edition of this work, and we expressed a hope that, like the smaller first edition, introduced to the English public under the distinguished auspices of the late Professor Jevons, it might in its turn be rendered accessible to English students unacquainted with the language of the original. We are glad to find that our recommendation, reinforced by similar suggestions advanced in other quarters, has been so soon, and so admirably, carried into effect. For we do not know of any other book in the English language that can be said to occupy the place which the volume before us fills. It is, no doubt—and that the eminent author would probably be the first to admit—unequal in parts; but in this respect it is only subject to the common failing of all such

books. There are also, it must be added, one or two errors which have escaped correction, or have established themselves afresh, in the translation. But we believe that it covers a wider field with more satisfaction than any other book of its class, and that accordingly it should find a place on the shelves of every student who is forming an economic library. For it furnishes a kind of reference catalogue to the main authorities on the various branches of the subject; and the impartiality, with which the catalogue has been compiled, is no less remarkable than the industry of the author and translator in endeavouring to render it complete. The translation has been, as the preface states, "enriched by the author with important changes and valuable additions," while the translator has "compiled an Index of Subjects," has "enlarged the Index of Authors," and has "added, under the designation of Sources, important anonymous works, periodicals and collections frequently referred to." In the work of revision the co-operation of Mr. Bonar has been enlisted, who has thereby added to the many obligations under which he has already placed English students by enabling them to know where to look for the best results of foreign investigation.

Inland Waterways; their Relation to Transportation. By Emory R. Johnson. Philadelphia: American Academy of Political and Social Science, 1893.

The construction of the Manchester Ship Canal has recently attracted public attention in England to the question handled in this book, and those who have interested themselves in the matter, will find here a full systematic treatment of the economic aspects of the case. Dr. Johnson shows that the question has assumed a new phase since the development of railways, different from that which it possessed before, but that this development, though superseding the old canal suited for the old traffic, has rather furnished than removed occasion for the new canal adapted to the new requirements of transportation. Waterways and railways have respectively, he urges, a place of their own as carriers, and by occupying it they will exercise a needed beneficial influence on one another. He examines accordingly the influence of inland waterways on railroad tariffs and on railroad revenues; and he points out how they may have a wholesome effect in restraining the excesses of the one without impairing the magnitude of the other. By competition they may reduce railway rates, and they may also relieve congested lines of the pressure of traffic, to which railways are unsuited, and leave more room and greater facilities for disposing of traffic for which those railways are more naturally fitted. He inquires under what conditions and to what extent canals can compete with railroads in the future, how far their construction, and the improvement of existing waterways, should be undertaken by the State or by corporations, on what principles the tolls demanded upon them should be adjusted; and he reviews the present position of the matter in England and in America. A special chapter is devoted to the Nicaragua Canal. The whole book supplies a useful and impartial summary of information and opinion.

Die Notenbank-Frage in beziehung zur Währungsreform in Osterreich-Ungarn, von Max Wirth. Frankfurt: J. D. Sauerlander, 1894.

The currency reform, which is now in process of operation in the Dual Monarchy, presents various aspects of interest to the economist. It bears of course intimately upon the general monetary question, and the eminent economist, who has written the pamphlet before us, does not neglect to embrace within the scope of his observations a survey of this monetary position, and of the events which have led to the attempt to introduce a gold standard into the Austro-Hungarian empire. But his attention is mainly directed to one particular aspect of the question, and that is the character and regulation of the note issue. With this object he makes a rapid review of the history, constitution and arrangements of the bank of France, of the bank of England, of the German Reichsbank, of the Italian banks, which have lately acquired an unenviable notoriety, and of the organisation of the note issue in the United States and in Switzerland. He discusses the arguments for and against private and State banks respectively as administrators of a note issue. He traces the history and examines the present position of the Austro-Hungarian Imperial Bank, and concludes with some observations upon its reorganisation. His general conclusion is that the State must, following the example of other countries, exercise a more considerable influence over the bank note, and the issuers be so far regarded as a department of the government.

Die Handelspolitik Englands und Seiner Kolonien in den letzten Jahrzehnten, von Dr. Carl Johannes Fuchs. Leipzig: Duncker und Humblot.

The work before us belongs to a class which must always possess great interest for English students, and is happily by no means rare. An independent review made by an eminent foreigner of English phenomena can scarcely fail to be instructive, and on such a subject as commercial regulation, where our free trade policy has enjoyed a position of almost solitary distinction, such a review is specially interesting. Dr. Fuchs acknowledges in his preface his obligations to many Englishmen for assistance in writing his work, but he has, so far as we can judge, formed his opinions with an independent mind. His book is divided into two parts. In the first he reviews the commercial policy of the mother country, and in the second that of the colonies, which have rarely emulated the example of freedom set them by the mother country. In the successive chapters of the first part he deals with the development of the policy of free trade and of tariff reform, especially with the events and incidents of the last twenty years and the course of trade from 1860 to 1890, and he concludes with a review of the tenets and position of the free trade school, and of the advocates of reciprocity and fair trade. In the second part of his work, the early colonial policy of the mother country, the subsequent action of the colonies themselves in matters of trade, the individual regulations of the more important among them,

whether self-governing like Canada, Australia, and the Cape, or dependent like India and the Crown Colonies, the growth of their trade with the world, and with Great Britain and the other colonies, and the questions and schemes recently raised and propounded in connection with Imperial Federation and Commercial Union, receive attention. The work is marked throughout by the industry and minuteness so characteristic of German research.

Statistical and Economical Articles in Recent Periodicals.

UNITED KINGDOM—

Economic Journal. Vol. iii, No. 11. September, 1893—

Report of Annual Meeting. Ethics and Economics: *Rt. Hon. G. J. Goschen, M.P.*

The Agricultural Problem (Part 1): *W. E. Bear.*

Labour Federation (Part II): *Clem. Edwards.*

Some controverted points in the Administration of Poor Relief (Part 1): *C. S. Loch.*

The Rise of the English Post Office: *A. M. Ogilvie.*

Fashion: *Caroline A. Foley.*

The Suspended Rupee and the policy of Contraction: *S. Dana Horton.*

Economic Review. Vol. iii, No. 4. October, 1893—

Bimetallism: a criticism: *E. Cannan.*

Old Age Pensions: *Rev. L. R. Phelps.*

Casuistry and Ethics of Investments: *Prof. P. Gardner.*

Village Settlements in Victoria: *Rev. H. F. Tucker.*

People's Banks for England: *H. W. Wolff.*

Transactions of the Manchester Statistical Society. Session 1892-93—

Considerations in relation to State Insurance of Old Age Pensions and other Benefits: *E. Sowerbutts.*

Extent of Food Imports into the United Kingdom: *S. Bourne.*

Effect of the Taxation of Land Values on Local Rates: *Rev. H. Rylett.*

Statistical view of some anomalies of our Educational System: *Rev. J. H. Hollowell.*

Eastward Ho! or some considerations on our responsibilities in the East: *Dr. L. C. Casartelli.*

UNITED STATES—

Annals of the American Academy of Political and Social Science. Vol. iv, No. 3. November, 1893—

Interest and Profits: *A. T. Hadley.*

Austrian Theory of Value: *S. M. Macvane.*

Subjective and objective view of Distribution: *J. Hobson.*

Total utility standard of deferred Payments: *E. A. Ross.*

UNITED STATES—*Contd.*

I

Journal of Political Economy. Vol. i, No. 4. September, 1893—

Scotch Banking: *J. S. Nicholson.*

Has the standard gold dollar appreciated?: *S. Newcomb.*

Economic condition of Spain in the Sixteenth Century:

B. Moses.

Silver Debate of 1890: *R. F. Howie.*

December, 1893—

Italian Banking Crisis: *R. Dalla Valta.*

German Labor Colonies and the Unemployed: *J. Mavor.*

Protective Purpose of the Tariff Act of 1789: *W.*

Hill.

Walker's Shares in Distribution: *F. C. Hicks.*

Quarterly Journal of Economics. Vol. viii, No. 1. October, 1893—

Duties on Wool and Woollens: *F. W. Taussig.*

The Place of Abstinence in the Theory of Interest: *T. N.*

Carver.

Value of Money: *F. A. Walker.*

The Prussian Business Tax: *J. A. Hill.*

Quarterly Publications of the American Statistical Association.

New Series. Vol. iii, No. 23. September, 1893—

Murders in Massachusetts: *W. M. Cook.*

Classification of Occupations in the Census Translation of report by *M. Bertillon.*

Growth of Cities in the United States during the decade 1880-90: *C. Boyd.*

Vital Statistics of an Apache Indian Community.

Yale Review. Vol. ii, No. 3. November, 1893—

Results of recent Investigations on Prices in the United States: *F. W. Taussig.*

State Sovereignty before 1789: *D. H. Chamberlain.*

Scope of Political Economy: *S. N. Patten.*

The Financier of the Confederate States: *J. C. Schwab.*

The Genesis of Capital: *J. B. Clark.*

FRANCE—

Annales de l'Ecole Libre des Sciences Politiques. No. 4. October, 1893—

The variations du revenu et du prix des terres en France au xvii^e et au xviii^e Siècle: *D. Zolla.* (*Continued.*)

Journal des Economistes—

September—

Le Congrès socialiste de Zurich: *G. de Molinari.*

Les Elections à la Chambre des Députés et l'Economie Politique: *E. Lamé-Fleury.*

Travaux parlementaires de la Chambre des Députés (1892-93): *A. Liesse.*

Combien nous reste-t-il d'écus de cinq francs: *A. De Foville.*

November—

Le nouveau régime douanier des Colonies: *B. de Belle.*

L'usure en Russie: *M. Inostranietz.*

FRANCE—Contd.

*Journal de la Société de Statistique de Paris—**October—*

La Fiscalité sur l'éclairage à Paris: *G. Bienaimé.*

Les Prix (extrait d'une communication faite à la Société nationale d'Agriculture de France): *E. Levasseur.*

November—

Les valeurs successorales et les donations: *T. Loua.*

Chronique des Transports: *M. Beaurin-Gressier.*

Chronique des finances publiques: *F. Desjardins.*

Chronique des banques, changes et métaux précieux: *P. des Essars.*

*La Réforme Sociale. Bulletin de la Société d'Economie Sociale et des Unions de la Paix Sociale—**No. 66, 16th September, 1893—*

La Philosophie morale et la Réforme sociale: *J. Gardair.*

Statistique de la Propriété foncière enregistrée en Galicie: *E. Dubois.*

No. 67, 1st October—

La gilde des métiers et négoce de Louvain (Belgique): *V. Brants.*

Les États-Unis contemporains: *W. Kaempfe.*

No. 68, 16th October—

Les œuvres de l'initiative privée à Genève: *P. Marin.*

La répression légale de l'usure en Allemagne: *E. Dubois.*

No. 69, 1st November—

La constitution de la famille et du Patrimoine sous le For en Béarn. *L. Batcave. (Continued in the next two numbers.)*

Le syndicat agricole de l'Anjou et ses sections paroissiales: *E. Nicolle.*

Les associations professionnelles et les Physiocrates: *A. des Cilleuls.*

No. 70, 16th November—

La suppression des Bureaux de Placement: *M. Vanlaer.*

No. 71, 1st December—

Une famille rurale sous l'ancien régime en Poitou (1550-1840): *A. Tandonnet.*

*Revue d'Economie Politique—**September—October, 1893—*

Les fondements philosophiques de l'Economie politique de Quesnay et de Smith: *G. Hasbach.*

Les nouvelles compagnies ouvrières. I. Associations égalitaires. II. Associations de productions à forme inégalitaire: *Dr. Regnault et M. Waton.*

Le problème de l'immigration dans les Etats Unis de l'Amérique: *P. Sitta.*

November—

Essai sur la Fabrique collective: *E. Schwiedland.*

Les grand magasins tels qu'ils sont: *P. du Maroussem.*

Comment en finir avec le "Sweating System?" *Mrs. Sidney Webb.*

GERMANY—

Jahrbuch für Gesetzgebung, Verwaltung, und Volkswirtschaft im Deutschen Reich. Herausgegeben von Gustav Schmoller. 1893—

Heft 1—

Über das Verhältnis der Arbeitgeber zu ihren Arbeitnehmern: *R. Roesicke.*

Die preussische Seidenindustrie des 18 Jahrhunderts: *O. Hintze.*

Italiens Finanz- und Volkswirtschaft.

Der Kellnerberuf und seine mögliche Reform: *K. Oldenberg.*

Die Erhöhung der Gütertarife der deutschen Eisenbahnen im Jahre 1874: *Dr. Leese.*

Die genossenschaftliche Bewegung in Italien: *L. Sbrojavacca.*

Die Lage der Arbeiter nach französischen Gesandtschaftsberichten: *G. Jollos.*

Die Verwaltung des Mass- und Gewichtswesens im Mittelalter: *G. Schmoller.*

Heft 2—

Die geschichtliche Entwicklung der Unternehmung. XII.

Die Handelsgesellschaften des Mittelalters und der Renaissancezeit: *G. Schmoller.*

Das System der Proportionalwahl: *Bernatzik.*

Der freie Handelsmakler in Bremen: *L. von Halle.*

Über sociale Steuerpolitik: *K. Oldenberg.*

Zur Geschichte der Physiokratie: *A. Oncken.*

Die Neuerungen im Deutschen Patentwesen: *Rhenius.*

Massregeln gegen Bodenzersplitterung: *J. G. Weiss.*

Die italienische Auswanderung: *E. von Philippovich.*

Heft 3—

Der wirtschaftliche Aufschwung der Baumwollspinnerei im Königreich Sachsen: *R. Martin.*

Die neuere socialistische Bewegung in der Schweiz: *F. Berghoff-Ising. (Continued in Heft 4.)*

Irische Rasse und irische Nation: *M. Jaffé.*

Die Rechtsprechung im Gewerbegericht: *E. Lautenschlager.*

Der Wiener Schlachtviehhandel in seiner geschichtlichen Entwicklung: *R. Riedl.*

Heft 4—

Die Handelsgesellschaften des 17—18 Jahrhunderts, hauptsächlich die grossen Kompagnien: *G. Schmoller.*

Bodenrecht und Bodenverteilung in Irland bis zum Schlusse des siebzehnten Jahrhunderts: *M. Jaffé.*

Zur Vorbildung der Eisenbahnbeamten: *de Terra.*

Der Verband Deutscher Gewerbevereine, seine Entstehung, Organisation, und bisherige Wirksamkeit: *T. Hampke.*

Die Berufsgenossenschaften als Träger einer nationalen Lohnstatistik: *H. Losch.*

Grundsätze der städtischen Bodenpolitik: *R. Eberstadt.*

Nochmals die englische und deutsche Baumwollindustrie: *G. von Schulze-Gävernitz.*

GERMANY—*Contd.*

*Jahrbücher für Nationalökonomie und Statistik. Dritte Folge—
Band vi, Heft 3, 1893—*

Neue und alte Messungsvorschläge in der Statistik: *H. Westergaard.*

Beiträge zur Lehre von den auswärtigen Wechselkursen: *C. Heiligenstadt.*

Die wirtschaftliche Gesetzgebung Oesterreich- Ungarns im Jahre 1892.

Ergebnisse der obligatorischen Unfallversicherung in Deutschland für die ersten fünf Jahre ihres Bestehens: *C. Hampke.*

Band vi, Heft 4—

Der Uebergang vom Versicherungsdarlehn zur reinen Versicherung: *A. Schaube.*

Agrarstatistische Untersuchungen: *J. Conrad.*

Die zweite Lesung des Entwurfes eines Bürgerlichen Gesetzbuches für das Deutsche Reich: *Greiff. (Continued in next number.)*

Die deutschen Aktiengesellschaften im Jahre 1891-92: *R. van der Borcht.*

Band vi, Heft 5—

Wohnungsnot und Absatzkrise: *H. Freese.*

Die Preise des Jahres 1892 verglichen mit den Vorjahren.

Die bimetallistische Bewegung in England: *R. Zuckerhandl.*

Die deutschen Handelskammern über den Schutz der Warenbezeichnungen: *R. van der Borcht.*

Vierteljahrschrift für Volkswirtschaft, Politik, &c. Band iv, Hälfte 1, 1893—

Mensch und Staat: *Dr. J. v. Held.*

Die Kehrseiten des modernen Konstitutionalismus: *Dr. J. v. Held.*

Stimmungsbilder aus der Zeit des Krimkrieges: *F. C. Philippson. (Continued.)*

Die politische und wirtschaftliche Bedeutung der Sibirischen Eisenbahn: *N. Syrkin.*

Vierteljahrshefte zur Statistik des Deutschen Reichs. Heft 4, 1893—

Statistik der Reichstagswahlen von 1893.

Die in den Jahren 1887 bis 1893 von deutschen Gerichten wegen Verbrechen und Vergehen gegen Reichsgesetze Verurtheilten. Vorläufige Mittheilung.

Die Schulbildung der im Ersatzjahre 1892-93 in die deutsche Armee und Marine eingestellten Rekruten.

Verunglückungen deutscher Seeschiffe in 1891 und 1892.

Die Bergwerke, Salinen, und Hütten im Deutschen Reich und in Luxemburg während 1892.

Salz-Produktion und Salz-Besteuerung im deutschen Zollgebiet während des Etatsjahres 1892-93.

Bierbrauerei und Bierbesteuerung im deutschen Zollgebiet während des Etatsjahres 1892-93.

Zucker-Gewinnung und- Besteuerung im deutschen Zollgebiet während des Betriebsjahres 1892-93.

GERMANY—*Contd.*

Zeitschrift für die gesamte Staatswissenschaft. (Jubilæumsband.)

Heft 1, 1894—

Zur Pathologie der Armut: *W. Roscher.*

Die Marx'sche Dialektik und ihr Einfluss auf die Taktik der Sozialdemokratie: *Rümelin.*

Untersuchung über die Grundlagen des Tarifwesens der Seeschiffahrt: *Freiherr v. Weichs.*

Die Jahresberichte der deutschen Fabrik-Aufsichtsbeamten:

Dr. F. Wörishoffer.

Zeitschrift für Litteratur und Geschichte der Staatswissenschaften.

Band ii, Heft 1 and 2, 1893—

Die rechtliche Natur der Modernen Volksvertretung: *K. Ricker.*

AUSTRIA—

Statistische Monatschrift—

August—September, 1893—

Zur Statistik der Sterblichkeit der arbeitenden Classen:

Dr. F. von Juraschek.

Die österreichischen Assecuranz. Gesellschaften im Jahre 1891. I. Die Lebens- und Renten-Versicherung: *R. Krickl.*

Bericht über die Thätigkeit des statistischen Seminars an der k.k. Universität Wien im Wintersemester 1892-93:

Dr. H. v. Schullern-Schrattenhofen.

October—

Die schaden- Versicherung: *R. Krickl.*

Die Fischerei an der adriatischen Küste Oesterreichs im Jahre 1891-92: *C. Krafft.*

ITALY—

Giornale degli Economisti—

September, 1893—

Gli spezzati d'argento: *A. de Viti de Marco.*

La dottrina dello Stato e la filosofia politica contemporanea:

F. Flora. (Continued in next two numbers.)

La legislazione economico-sociale Austriaca negli ultimi anni: *H. v. Schullern-Schrattenhofen.* (Continued in next number.)

La definizione economico-sociale del risparmio: *G. Montemartini.*

October—

Considerazioni sui principii fondamentali dell' economia politica pura: *V. Pareto.*

November—

Teoria della popolazione: *E. La Loggia.* (Continued in next number.)

December—

La crisi e il programma liberale: *La Direzione.*

Francesco Ferrara all' Università di Torino, 1849-59: *C. de Martiis.*

Il fallimento quale sintomo della potenza commerciale d'un paese: *A. Contento.*

ITALY—*Contd.*

Journal de Statistique Suisse. Livr. 4, 1893—

Statistique des aliénés, spécialement à Genève et en Suisse:

Dr. P. Ladame.

Die Ferienkolonien in der Schweiz in den ersten 15 Jahren ihrer Entwicklung (1876-90): *H. Marthaler.*

Adolf Quetelet als Moralstatistiker: *Dr. N. Reichesberg.*

Vier thurganische Haushaltungsbudgets: *Dr. E. Hofmann.*

Geschichte des Armenwesens im Kanton Bern von der Reformation bis auf die neuere Zeit: *K. Geiser.*

Die Entwicklung der Seidenindustrie: *R. Sarasin-Warnery.*

VII.—*Additions to the Library.*

Additions to the Library during the Quarter ended 15th December, 1893, arranged alphabetically under the following heads:—(a) Foreign Countries; (b) India and Colonial Possessions; (c) United Kingdom and its Divisions; (d) Authors, &c.; (e) Societies, &c. (British); (f) Periodicals, &c. (British).

Donations.	By whom Presented.
(a) Foreign Countries.	
Argentine Republic—	
Comercio Exterior. Datos trimestrales del, Nos. 78 and 79. Años 1892-93. 8vo.	The Director-General of Statistics
Comercio y Navegacion de la Republica, Estadistica del, correspondiente al año 1892 La. 8vo.	
Higiene Publica. Anales de. (Current monthly numbers)	Dr. E. R. Coni
BUENOS AYRES (CITY). Bulletin mensuel de Statistique municipale. (Current numbers)	The Municipal Statistical Bureau
Instituto Geografico Argentino. Boletin del, Tomo xiv, Cuadernos 1—4. Maps, 8vo., 1893.....	The Institute
Austria-Hungary—	
Anbauflächen und Erträge der Zuckerrüben in 1884-92. Maps, 8vo.	The Ministry of Agriculture
Handel des Zollgebiets. Statistische Uebersichten betreffend den auswärtigen. (Current monthly numbers)	The Statistical Department, Ministry of Commerce
Sanitätswesens, Statistik des, für 1890. Fol.	The Central Statistical Commission
Statistische Monatschrift. (Nov. and Dec., 1892, and current numbers for 1893)	
Verkehrs. Statistik des, 1881-91, Abtheilung 1, Landstrassen, Wasserstrassen, Flussschiffahrt. 4to.	
Viehählung, Ergebnisse der, vom 31 Dec., 1890. Heft 2, Detail-Bearbeitung. 4to.	The Royal Hungarian Statistical Bureau
HUNGARY. Volkszählung. Ergebnisse der in den Ländern der Ungarischen Krone am anfang des Jahres 1891 durchgeführten, Theil II, Berufsstatistik der Bevölkerung. Fol.	
PRAGUE. Bulletins hebdomadaires et trimestriel de la ville de Prague et des communes-faubourgs. (Current numbers)	The Municipal Statistical Bureau

Donations—Contd.

Donations.	By whom Presented.
(a) Foreign Countries—Contd.	
Belgium—	
Annales des Travaux Publics. Tome L, cahier 4. (Contains—Statistique des mines, minières, &c., pour 1892.) Plates, 8vo.	The Administration of Mines
Mouvement Commercial avec les Pays Etrangers. (Current monthly numbers)	
Population. Recensement général du 31 Décembre, 1890. Tomes i et ii. Fol.	The Bureau of Gene- ral Statistics
<i>Brussels—</i>	
Annuaire Démographique et Tableaux statistiques des causes de décès. Années 1890, 1891, et 1892	Dr. E. Janssens
Bulletins hebdomadaires et trimestriel de statistique démographique et médicale. (Current numbers)	
Rapport sur les opérations du service d'hygiène et sur la salubrité publique de la Ville pendant 1891. 8vo.	
<i>Académie royale de Belgique—</i>	
Annuaire de l'Académie, années 1892 et 1893. 2 vols., 12mo. portraits	The Academy
Bulletins. 3 ^e Serie, tomes xxii—xxv, 1891-93. 4 vols., 8vo., plates	
Bulgaria. Statistique du Commerce de la Principauté avec les Pays Etrangers pendant 1892. La. 8vo.	The Statistical Bu- reau
China. Customs Gazette. No. xcviii, April—June, 1893	Sir Robert Hart, Bart., G.C.M.G.
Denmark—	
Importation et exportation, production d'eau-de-vie, de bière, et de sucre de betteraves en 1892. 4to.	The Statistical Bu- reau
Nationalökonomisk Tidskrift, 1893. (Current num- bers)	The Danish Political Economy Society
Egypt—	
Finances. Comité des, Note au Conseil des Ministres [sur les recettes et dépenses pour l'exercice 1894]. Fol.	Sir E. M. Palmer, K.C.M.G.
Postal Guide. Egyptian, published half-yearly. No. 11. Dec., 1893. 8vo.	
Services Sanitaires, &c. Bulletin hebdomadaire de l'Administration des. (Current numbers)	The Director Gene- ral of Post Office
Institut Egyptien. Bulletin. (Current numbers.) 8vo. 1893	The Health Depart- ment
Egyptian Statistical Tableaux for the years 1891 and 1892. 25th and 26th issues. Sheets	The Institute
France—	Messrs. R. J. Moss & Co.
Agriculture. Bulletin du Ministère de l'. Nos. 4 et 5, 1893	
Chemins de Fer Français. Statistique des, au 31 Décembre, 1891. Documents divers. 1 ^{re} Partie.	The Ministry of Agri- culture
France—Intérêt général. 2 ^e Partie. France— Intérêt local, Algérie et Tunisie. 4to.	
	The Ministry of Pub- lic Works

Donations—Contd.

Donations.	By whom Presented.
(a) Foreign Countries—Contd.	
France—Contd.	
Commerce de la France avec ses Colonies et les Puissances étrangères. Tableau Général du, pendant l'année 1892. La 4to.....	The Director-General of Customs
Finances, Ministère des. Bulletin de Statistique et de Législation comparée. (Current monthly numbers)	The Ministry of Finance
Travaux Publics, Ministère des. Bulletin de Statistique et Législation comparée. (Current monthly numbers)	The Ministry of Public Works
L'Economiste Français. No. 28, 1890. Table des matières du 2 ^e vol. de 1891. (Current numbers, 1893)	The Editor
Journal des Economistes. (Current monthly numbers)	"
Le Monde Economique. (Current weekly numbers).....	"
Polybiblion. Revue Bibliographique Universelle. Parties Littéraire et Technique. (Current monthly numbers)	"
La Réforme Sociale. (Current numbers)	"
Le Rentier. Journal Financier Politique. (Current numbers)	"
Revue d'Economie Politique. (Current monthly numbers)	"
Revue Géographique Internationale. (Current monthly numbers)	"
Ecole Libre des Sciences Politiques, Annales. No. 4. 1893	The Institution
Société de Statistique de Paris, Journal. (Current monthly numbers)	The Society
Germany—	
Handel des deutschen Zollgebiets. Monatliche Nachweise über den Auswärtigen. (Current monthly returns)	The Imperial Statistical Bureau
Justiz-Statistik. Deutsche, Bearbeitet im Reichs-Justizamt. Jahrgang v and vi. 2 vols. 8vo. 1891-93	The Imperial Judicial Bureau
Vierteljahrshefte zur Statistik des Deutschen Reichs. 1893. Heft 4. 4to.	The Imperial Statistical Bureau
Prussia—	
Brände im Preussischen Staate. Statistik für die Jahre 1885-87. 2 vols. Fol.	The Royal Prussian Statistical Bureau
Ernteertrages. Die Ergebnisse der Ermittlung des, für 1892. Maps. Fol.....	The Royal Prussian Statistical Bureau
Volkszählung. Die endgültigen Ergebnisse der, vom 1 Dec., 1890. Theil 2. Maps and diagrams	The Royal Prussian Statistical Bureau
Zeitschrift des K. Preussischen Statistischen Bureau. 1893. Vierteljahrsheft III. Die preussische Bevölkerung nach ihrer Muttersprache und Abstammung. Diagrams and maps	The Royal Prussian Statistical Bureau
Berlin—	
Eheschliessungen, Geburten, Sterbefälle, und Witterung. (Current weekly and monthly numbers)	The Statistical Bureau of Berlin
Statistisches Jahrbuch der Stadt Berlin. 1891. 8vo.	The Statistical Bureau of Berlin

Donations—Contd.

Donations.	By whom Presented.
(a) Foreign Countries— <i>Contd.</i>	
Germany—<i>Contd.</i>	
DRESDEN. Mittheilungen des Statistischen Amtes der Stadt Dresden. N ^o 2—4, 1892. Fol.	The Statistical Bureau of Dresden
<i>Frankfort—</i>	
Beiträge zur Statistik der Stadt, Neue Folge.	The Statistical Bureau
Heft 2, Bewegung der Bevölkerung im Jahre 1891, insbesondere Studien über die Wanderungen.	
Diagram, la 8vo.	
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(Corrected to 31st December, 1893.)

ROYAL STATISTICAL SOCIETY.

(FOUNDED 1834. INCORPORATED 1887.)

9, ADELPHI TERRACE,
STRAND, W.C., LONDON.

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1894.

ROYAL STATISTICAL SOCIETY,

9, ADELPHI TERRACE, STRAND, W.C., LONDON.

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HIS ROYAL HIGHNESS THE PRINCE OF WALES, K.G.

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ROYAL STATISTICAL SOCIETY.

No. 9, ADELPHI TERRACE, STRAND, W.C., LONDON.

NOTICES TO FELLOWS.

December, 1893.

THE Council desire to call the attention of the Fellows to the fact that notwithstanding the change in the name of the Society by the addition of the word "Royal," they are still, in using letters after their names, signifying the membership of the Society, only entitled under Rule 6, to use the letters F.S.S.

ANNUAL Subscriptions are due in advance, on the 1st of January in each year. A Form for authorising a Banker or Agent to pay the Subscription Annually will be forwarded by the Assistant Secretary, on application. When convenient, this mode of payment is recommended. Drafts should be made payable to the order of "The Royal Statistical Society," and crossed "*Drummond and Co.*"

To be included in the Ballot at any particular Ordinary Meeting, the Nomination Papers of Candidates for Fellowship, must be lodged at the Office of the Society, at least six days before the date of such Meeting.

FELLOWS who may desire to receive Special and Separate Notices of each Paper to be read before the Society at the Ordinary Meetings, should indicate their wishes to the Assistant Secretary.

THE Ordinary Meetings of the Society are now held, by permission of the Lords of the Committee of Council on Education, in **The Lecture Theatre of the Museum of Practical Geology, 28, Jermyn Street, S.W.**

THE Library and the Reading Room are open daily for the use of Fellows from 10 A.M. to 5 P.M., excepting on Saturdays, when they are closed at 2 P.M. The Society's Rooms are entirely closed during the month of September, but books required by Fellows can be obtained from the Library on application.

FELLOWS borrowing books from the Library are requested to be good enough to return them with as little delay as possible, but without fail at the expiration of a month, and without waiting for them to be recalled. (See p. 72.)

FELLOWS changing their Addresses are requested to notify the same to the Assistant Secretary, so that delay in forwarding communications, or the *Journal*, may be avoided.

BY ORDER OF THE EXECUTIVE COMMITTEE.

CALENDAR FOR THE SESSION 1893-94.

1893	MON.	TUES.	WED.	THURS.	FRI.	SATUR.	SUN.	1894	MON.	TUES.	WED.	THURS.	FRI.	SATUR.	SUN.
NOV.	...	...	1	2	3	4	5	MAY	...	1	2	3	4	5	6
	6	7	8	9	10	11	12		7	8	9	10	11	12	13
	13	14	15	16	17	18	19		14	15	16	17	18	19	20
	20	21	22	23	24	25	26		21	22	23	24	25	26	27
	27	28	29	30					28	29	30	31			
DEC.	...	...	...	...	1	2	3	JUNE	...	...	...	...	1	2	3
	4	5	6	7	8	9	10		4	5	6	7	8	9	10
	11	12	13	14	15	16	17		11	12	13	14	15	16	17
	18	19	20	21	22	23	24		18	19	20	21	22	23	24
	25	26	27	28	29	30	31		25	26	27	28	29	30	
1894								JULY	...	...	...	...	...	...	1
JAN.	1	2	3	4	5	6	7		2	3	4	5	6	7	8
	8	9	10	11	12	13	14		9	10	11	12	13	14	15
	15	16	17	18	19	20	21		16	17	18	19	20	21	22
	22	23	24	25	26	27	28		23	24	25	26	27	28	29
	29	30	31						30	31					
FEB.	1	2	3	4	AUG.	1	2	3	4	5
	5	6	7	8	9	10	11		6	7	8	9	10	11	12
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	19	20	21	22	23	24	25		20	21	22	23	24	25	26
	26	27	28						27	28	29	30	31		
MAR.	1	2	3	4	SEP.	1	2
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	26	27	28	29	30	31			24	25	26	27	28	29	30
APR.	1	OCT.	1	2	3	4	5	6	7
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	9	10	11	12	13	14	15		15	16	17	18	19	20	21
	16	17	18	19	20	21	22		22	23	24	25	26	27	28
	23	24	25	26	27	28	29		29	30	31				
	30														

The dates of the Ordinary Meetings of the Society, at which Papers are read and discussed, are marked in the Calendar above by **Black Figures**.

The Chair will be taken at 7.45 p.m., precisely.

These Meetings are now held, by permission of the Committee of Council on Education, in The Lecture Theatre of the Museum of Practical Geology, 28, Jermyn Street, S.W.

THE ANNUAL GENERAL MEETING

WILL BE HELD ON THE 26TH JUNE, 1894, AT 5 P.M.,
AT 9, ADELPHI TERRACE.

ROYAL STATISTICAL SOCIETY.

Programme of the Session 1893-94.

THE

MONTHLY MEETINGS

ARE HELD ON THE

THIRD TUESDAY IN THE MONTHS OF NOVEMBER—JUNE
(EXCEPT MAY),

In the LECTURE THEATRE of the MUSEUM OF PRACTICAL GEOLOGY,
28, JERMYN STREET, S.W., at 7.45 p.m.

Tuesday, Nov. 21	Tuesday, March 20
„ Dec. 19	„ April 17
„ Jan. 16	„ May 22
„ Feb. 20	„ June 19

The following Papers have been read (Dec., 1893):—

The President's Opening Address on "Life and Labour in London: First results of an inquiry based on the 1891 Census." By CHARLES BOOTH, Esq. (Delivered 21st November.)

"The Perils and Protection of Infant Life" (Howard Medal Prize Essay). By DR. HUGH R. JONES, M.A., D.P.H., B.Sc. (Read 19th December).

The following Papers have been offered; and from these and from others that may yet be offered, a selection will be made by the Council:—

"Railway Statistics." By W. M. ACWORTH, M.A.

"Some Statistics of Education in India." By J. A. BAINES, Census Commissioner for India.

"Pauperism and Old Age." By CHARLES BOOTH (President).

"The Statistics of Litigation since 1860." By JOHN MACDONELL, LL.D., A Master of the Supreme Court.

"Railway Rates, and the cost of Railway Carriage and Terminals." By R. PRICE-WILLIAMS, M.Inst.C.E.

"Electoral Statistics and Theories of Representation." By JAMES PARKER SMITH, M.P.

ROYAL STATISTICAL SOCIETY.

AN OUTLINE OF ITS OBJECTS.

THE *Royal Statistical Society* was founded, in pursuance of a recommendation of the British Association for the Advancement of Science, on the 15th of March, 1834; its objects being, the careful collection, arrangement, discussion and publication, of facts bearing on and illustrating the complex relations of modern society in its social, economical, and political aspects,—especially facts which can be stated numerically and arranged in tables;—and also, to form a Statistical Library as rapidly as its funds would permit.

The Society from its inception has steadily progressed. It now possesses a valuable Library of more than 27,000 volumes, and a Reading Room. Ordinary meetings are held monthly from November to June, which are well attended, and cultivate among its Fellows an active spirit of investigation; the Papers read before the Society are, with an abstract of the discussions thereon, published in its *Journal*, which now consists of fifty-six annual volumes, and forms of itself a valuable library of reference.

The Society has originated and statistically conducted many special inquiries on subjects of economic or social interest, of which the results have been published in the *Journal*, or issued separately.

To enable the Society to extend its sphere of useful activity, and accomplish in a yet greater degree the various ends indicated, an increase in its numbers and revenue is desirable. With the desired increase in the number of Fellows, the Society will be enabled to publish standard works on Economic Science and Statistics, especially such as are out of print or scarce, and also greatly extend its collection of Foreign works. Such a well-arranged Library for reference, as would result, does not at present exist in England, and is obviously a great *desideratum*.

The Society is cosmopolitan, and consists of Fellows and Honorary Fellows, forming together a body, at the present time, of over *one thousand* Members.

The Annual Subscription to the Society is *Two Guineas*, and at present there is no entrance fee. Fellows may, on joining the Society, or afterwards, compound for all future Annual Subscriptions by a payment of *Twenty Guineas*.

The Fellows of the Society receive gratuitously a copy of each part of the *Journal* as published Quarterly, and have the privilege of purchasing back numbers at a reduced rate. The Library (reference and circulating), and the Reading Room, are open daily, for the convenience of Members.

Nomination Forms and any further information will be furnished, on application to the *Assistant Secretary*, 9, *Adelphi Terrace*, Strand, W.C., London.

ROYAL STATISTICAL SOCIETY.

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Note.—Sets—or Copies of any number—of the *Journal*, or of the other Publications of the Society (if not out of print), can be obtained of the publisher, E. Stanford, 26 and 27, Cockspur Street, Charing Cross, London, S.W., or through any bookseller.

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Transactions— Vol. 1, part 1. 148 pp. 4to. 1837	
Journal (published quarterly)— Vols. 1—56. 8vo. 1838-93	5s. each part*
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Catalogue of the Library— iv + 142 pp. 8vo. 1859.....	(Out of print)
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Catalogue of the Library (New)— iv + 573 pp. Cloth, super royal 8vo. 1884	10s.
Index to the Catalogue of 1884— i + 372 pp. Cloth, super royal 8vo. 1886	10s.
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List of Fellows, Rules and Bye-Laws, Regu- lations of the Library, and Outline of the Objects of the Society, &c. Corrected annually to 31st December. 8vo.	Issued gratuitously

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NOTE.—One or two numbers of the *Journal* are now out of print.

* Before 1870 the price varied.

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ROYAL STATISTICAL SOCIETY.

Founded 15th March, 1834, Incorporated 31st January, 1887.

LIST OF THE FORMER

Patron and Presidents

OF THE SOCIETY.

Patron.

HIS ROYAL HIGHNESS THE PRINCE CONSORT, K.G.....	1840-61
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Period.

Presidents.

The Most Noble the Marquis of Lansdowne, F.R.S.	1834-36
Sir Charles Lemon, Bart., M.P., LL.D., F.R.S.	1836-38
The Right Hon. the Earl Fitzwilliam, F.R.S.	1838-40
The Right Hon. the Viscount Sandon, M.P.	1840-42
(afterwards Earl of Harrowby.)	
The Most Noble the Marquis of Lansdowne, K.G., F.R.S..	1842-43
The Right Hon. the Viscount Ashley, M.P.	1843-45
(afterwards Earl of Shaftesbury.)	
The Right Hon. the Lord Monteagle	1845-47
The Right Hon. the Earl Fitzwilliam, F.R.S.	1847-49
The Right Hon. the Earl of Harrowby	1849-51
The Right Hon. the Lord Overstone	1851-53
The Right Hon. the Earl Fitzwilliam, K.G., F.R.S.	1853-55
The Right Hon. the Earl of Harrowby, K.G., D.C.L.	1855-57
The Right Hon. the Lord Stanley, M.P.	1857-59
(afterwards Earl of Derby.)	
The Right Hon. the Lord John Russell, M.P., F.R.S.	1859-61
(afterwards Earl Russell.)	
The Right Hon. Sir J. S. Pakington, Bart., M.P., G.C.B. ..	1861-63
(afterwards Lord Hampton.)	
Colonel W. H. Sykes, M.P., F.R.S.	1863-65
The Right Hon. the Lord Houghton, D.C.L., F.R.S.	1865-67
The Right Hon. W. E. Gladstone, M.P., D.C.L.	1867-69
W. Newmarch, F.R.S., Corr. Mem. Inst. of France	1869-71
William Farr, M.D., C.B., D.C.L., F.R.S.	1871-73
William A. Guy, M.B., F.R.S.	1873-75
James Heywood, M.A., F.R.S., F.G.S.	1875-77
The Right Hon. George Shaw Lefevre, M.P.	1877-79
Thomas Brassey, M.P.	1879-80
(now the Right Hon. Lord Brassey.)	
The Right Hon. Sir James Caird, K.C.B., F.R.S.	1880-82
Robert Giffen, C.B., LL.D., F.R.S.	1882-84
Sir Rawson W. Rawson, K.C.M.G., C.B.	1884-86
The Right Hon. George Joachim Goschen, M.P., LL.D., F.R.S.	1886-88
T. Graham Balfour, M.D., F.R.S., F.R.C.P.	1888-90
Frederic J. Mouat, M.D., LL.D., F.R.C.S.	1890-92

LIST OF FELLOWS.

*Those marked thus * have compounded for their Annual Subscriptions.*

The names of Members of Council are printed in SMALL CAPITALS.

Year of Election.	
1888	Ackland, Thomas, G., F.I.A., <i>St. Mildred's House, Poultry, E.C.</i>
1888	Acland, The Right Hon. Arthur Herbert Dyke, M.A., M.P., 28, <i>Cheyne-walk, Chelsea, S.W.</i>
1862	Acland, Sir Henry Wentworth, Bart., K.C.B., M.D., F.R.S., <i>Oxford.</i>
1869	Acland, The Rt. Hon. Sir Thomas Dyke, Bart., F.R.G.S., <i>Killerton, Exeter.</i>
1892	Acworth, William M., M.A., 47, <i>St. George's-square, S.W.</i>
1879	Adam, Robert (<i>City Chamberlain</i>), <i>City Chambers, Edinburgh.</i>
1891	Addington, Right Hon. Lord, 24, <i>Princes-gate, S.W.</i>
1890	Adler, Marcus Nathan, M.A., F.I.A., 1, <i>Bartholomew-lane, E.C.</i> , and 22, <i>Craven-hill, W.</i>
1884	Agius, Edward Tancred, 90, <i>Belsize-park-gardens, N.W.</i>
1876	Aitchison, William John, 2, <i>Princes-street, E.C.</i>
1885	Aitken, Thomas, 132, <i>West Regent-street, Glasgow.</i>
1879	Akers-Douglas, The Right Hon. Aretas, M.P., J.P., <i>Chilston Park, Maidstone, Kent.</i>
1876	Aldwinckle, Thomas Williams, 1, <i>Victoria-street, S.W.</i>
1887	Allard, Alphonse, 52, <i>Avenue Louise, Brussels, Belgium.</i>
1889	Allen, Frank, J.P., <i>Guildford-terrace, off Hill-st., Thorndon, Wellington, N.Z.</i>
1876	Allen, John T. R., 13, <i>York-road, Hove, Brighton.</i>
1877	Allen, Joseph, 18, <i>Crossley-street, Halifax, Yorkshire.</i>

Year of Election.	
1893	Anderson, Herbert William, <i>Halling, Kent.</i>
1889	Anderson, John Andrew (Alderman), <i>Faversham, Kent.</i>
1886	Andras, Henry Walsingham, F.I.A., <i>25, Pall Mall, S.W.</i>
1890	* Andrews, Henry, <i>18, Essex-street, Strand, W.C.</i>
1871	Angus, R. B., <i>Montreal, Canada.</i>
1890	Ann, Alfred E., F.R.G.S., <i>The Oaks, Snaresbrook, Essex.</i>
1884	Anning, Edward James, <i>78, Cheapside, E.C.</i>
1893	Appleyard, John, <i>30, Clarendon-street, Keighley, Yorkshire.</i>
1872	* Archibald, William Frederick A., M.A., <i>4, Brick-court, Temple, E.C.</i>
1892	Argyle, Jesse, <i>74, Lordship-road, Stoke Newington, N.</i>
1888	Asch, William, <i>4, Albert Mansions, 118, Victoria-street, S.W.</i>
1883	Aschenheim, Gustav, <i>27, Mincing-lane, E.C.</i>
1891	Ashman, Rev. Joseph Williams, M.A., M.D., <i>Harrow, and National Club, 1, Whitehall-gardens, S.W.</i>
1888	Atkinson, Charles, <i>Benhilton, St. Saviour's-road, Croydon.</i>
1893	Atkinson, Frederick J., <i>11, Muir-road, Allahabad, India.</i>
1871	Atkinson, George W., <i>1, Regent-street, Barnsley.</i>
1892	Atkinson, Robert Hope, <i>Equitable Life Ass. Soc. of United States, Sydney, N.S.W.</i>
1870	Avery, Thomas, <i>Church-road, Edgbaston, Birmingham.</i>
1893	Aves, Ernest, M.A., <i>Toynbee Hall, 28, Commercial-street, E.</i>
1872	* Babbage, Major-General Henry Prevost, <i>Mayfield, Lansdown-place, Cheltenham</i>
1890	Back, Frederick, <i>Hobart, Tasmania.</i>
1872	* Backhouse, Edmund, <i>Bank, Darlington.</i>

Year of Election.	
1892	Bacon, George Washington, F.R.G.S., 127, <i>Strand, W.C.</i>
1879	Baden-Powell, Sir George, K.C.M.G., M.P., 114, <i>Eaton-square, S.W.</i>
1855	BAILEY, ARTHUR HUTCHESON, F.I.A., 7, <i>Royal Exchange, E.C.</i>
1890	Bain, William Whyte, 23, <i>Castlereagh-street, Sydney, New South Wales.</i>
1881	Baines, Jervoise Athelstane, I.C.S., <i>India Office, S.W.</i>
1887	Baldwin, Alfred, M.P., J.P., <i>Wilden House, near Stourport.</i>
1878	Balfour, The Right Hon. Arthur J., P.C., M.P., LL.D., F.R.S., 4, <i>Carlton-gardens, S.W.</i>
1848	Balfour, General Sir George, K.C.B., D.L., 6, <i>Cleveland-gardens, Bayswater, W.</i>
1886	Balfour, Gerald William, M.P., 67, <i>Addison-road, Kensington, W.]</i>
1884	Barlow, William Henry, F.R.S., C.E., 2, <i>Old Palace yard, S.W.</i>
1887	Barnes, Joseph Howard, F.I.A., 70, <i>Lombard-street, E.C.</i>
1889	Barr, Andrew Wallace, <i>Cophthall House, Cophthall-avenue, E.C.</i>
1885	Barratt, Thomas J., 75, <i>New Oxford-street, W.</i>
1887	*Barrett, Thomas Squire, F.Z.S., M.A.I., F.R. Hist. Soc., <i>High-street, Berkhamstead.</i>
1883	Barron, Thomas Walter, M.A., M.B., M.R.C.S., &c., 10, <i>Old Elvet, Durham.</i>
1888	Barrow, Alfred, <i>Dunluchin, Plaistow, Bromley, Kent.</i>
1878	Barry, Francis Tress, M.P., <i>St. Leonard's-hill, Windsor.</i>
1888	*Bartlett, Frederick W., 82, <i>Camberwell Grove, S.E.</i>
1889	Bastable, Professor C. F., M.A., 6, <i>Trevelyan-terrace, Brighton-road, Rathgar, Co. Dublin.</i>
1873	Bate, George, 258, <i>Waterloo-road, Burslem, Staffs.</i>
1877	BATEMAN, ALFRED EDMUND, C.M.G. (<i>Hon. Secretary</i>), <i>Board of Trade, Whitehall-gardens, S.W.</i>
1888	Batten, John W., 3, <i>Harcourt Buildings, Temple, E.C.</i>
1877	Bayfield, Arthur, 95, <i>Colmore-row, Birmingham.</i>
1873	*Baynes, Alfred Henry, F.R.G.S., 19, <i>Furnival-street, Holborn, E.C.</i>
1871	*Baynes, William Wilberforce, F.I.A., <i>Pickhurst Wood, Bromley, Kent.</i>

Year of Election.	
1875	*Beardsall, Francis E. M., 63, <i>Brown-street, Manchester.</i>
1875	*Beaufort, William Morris, F.R.A.S., F.R.G.S., 18, <i>Piccadilly. W.</i>
1882	*Beazeley, Michael Wornum, M.A., 8, <i>St. Paul's-road, Thornton Heath, Surrey.</i>
1883	Beckingham, James Horace, <i>Westwood House, Ryton-on-Tyne, Co. Durham.</i>
1884	Bedford, James, <i>Woodhouse Cliff, Leeds.</i>
1889	Beecroft, William Henry, <i>Guildhall, Westminster, S.W.</i>
1882	*BEETON, HENRY RAMIE (6a, <i>Austin Friars, E.C.</i>), 9, <i>Maresfield-gardens, Hampstead, N.W.</i>
1886	Begg, Ferdinand Faithfull, <i>Bartholomew House, E.C.</i>
1890	Bell, Frederick, F.I.A., 9, <i>King-street, Cheapside, E.C.</i>
1892	Bell, Frederick William, <i>P.O. Box 916, Johannesburg, S. Africa.</i>
1880	Bell, Sir Isaac Lowthian, Bart., J.P., F.R.S. <i>Rounton Grange, Northallerton, York, N.R.</i>
1884	Bell, James T., <i>Northcote, Dowanhill, viâ Glasgow.</i>
1888	Bellew, Thomas Acheson, 65, <i>Tower Buildings, Liverpool.</i>
1888	*Benson, Godfrey R., M.P., <i>Norfolk House, Victoria Embankment, W.C.</i>
1884	*Bentley, Richard, F.R.G.S., <i>Upton, Slough, Bucks.</i>
1884	Berg, Wilhelm, 37, <i>Mincing-lane, E.C.</i>
1890	Berry, Arthur, M.A., <i>King's College, Cambridge.</i>
1891	Berry, Oscar, <i>Monument-yard, E.C.</i>
1875	Bevan, Thomas, <i>Stone Park, near Dartford, Kent.</i>
1869	*Beverley, The Hon. Mr. Justice Henry, 42, <i>Chowringhee, Calcutta.</i>
1879	*Bickford-Smith, William, J.P., D.L., <i>Trevarno, Helston, Cornwall.</i>
1891	Biddle, Daniel, M.R.C.S., L.S.A., <i>Charlton Lodge, Kingston-on-Thames.</i>
1886	Biggs, Thomas Hesketh, (Comptroller), <i>Rangoon, Burma.</i>
1888	Billinghurst, Henry F., 41, <i>Lothbury, E.C.</i>
1883	Binney, William, 34, <i>Great St. Helens, E.C.; Hillfield, Hampstead, N.W.</i>

Year of Election.	
1888	Binns, Richard William, F.S.A., <i>Diglis House, Worcester.</i>
1884	Birch, Robert W. Peregrine, M. Inst. C.E., 5, <i>Queen Anne's-gate, Westminster, S.W.</i>
1892	*Birkmyre, William. M.P., <i>Reform Club Chambers, Pall Mall, S.W.</i>
1890	Bishop, Frederic Sillery, M.A., J.P., <i>Glanrafon, Sketty, Swansea.</i>
1881	Bishop, George, 113, <i>Powis-street, Woolwich.</i>
1883	Blades, R. H., 23, <i>Abchurch-lane, E.C.</i>
1884	Boileau, John Peter H., M.D., &c. (Brigade-Surgeon Lieut.-Col.) <i>Medical Staff, Meerut, Bengal.</i>
1881	Bolitho, Thomas Robins, <i>Penalverne, Penzance.</i>
1887	Bolling, Francis, 2, <i>Laurence Pountney-hill, E.C.</i>
1890	Bolton, Edward, <i>Clifton House, Beverley-road, Hull.</i>
1880	Bolton, Joseph Cheney, M.P., <i>Carbrook, Larthbert, Stirlingshire.</i>
1885	*BONAR, JAMES, M.A., LL.D., <i>Civil Service Commission, Westminster, S.W.</i>
1887	Bond, Edward, <i>Elm Bank, Hampstead, N.W.</i>
1885	BOOTH, CHARLES (President), 2, <i>Talbot-court, Gracechurch-street, E.C.</i>
1885	Bordman, Emanuel Linden, <i>Victoria House, Trinity-street, Southwark, S.E.</i>
1879	Bordman, Thomas Joseph Clarence Linden, LL.D., <i>Victoria House, Trinity-street, Southwark, S.E.</i>
1888	Bottomley, George, <i>Arboursfield House, Derby.</i>
1871	BOURNE, STEPHEN, <i>Abberley, Wallington, Surrey.</i>
1885	Bovell, The Hon. Henry Alleyne, LL.B., <i>Chelston, Barbados, West Indies.</i>
1876	Bowen, Horace George, <i>Bank of England, E.C.</i>
1879	Bowley, Edwin, F.I.A., 78, <i>South Hill Park, Hampstead.</i>
1886	Boyle, Sir Courtenay, K.C.B., <i>Board of Trade, Whitehall-gardens, S.W.</i>
1883	Braby, Frederick, F.C.S., F.G.S., <i>Bushey Lodge, Teddington.</i>
1875	Braby, James, J.P., <i>Maybanks, Rudgwick, Sussex.</i>
1888	Bramwell, Sir Frederick J., Bart., D.C.L. F.R.S., 5, <i>Great George-street, Westminster, S.W.</i>

YEAR OF
ELECTION.

- 1873 BRASSEY, THE RIGHT HON. LORD, K.C.B.
(*Honorary Vice-President*),
4, *Great George-street, S.W.*; and 24, *Park-lane, W.*
- 1864 *Braye, The Right Hon. Lord,
Stanford Hall, Rugby.
- 1884 Breckon, John Robert,
53, *John-street, Sunderland.*
- 1883 Broad, Harrington Evans, M.P.,
1, *Walbrook, E.C.*
- 1876 Brodburst, Bernard Edward, F.R.C.S.,
20, *Grosvenor-street, Grosvenor-square, W.*
- 1883 Brooke, C. B.,
16, *Leadenhall-street, E.C.*
- 1874 Broom, Andrew, A.C.A.,
2, *De Crespigny-terrace, Denmark-hill, S.E.*
- 1878 Brown, Alexander Hargreaves, M.P.,
12, *Grosvenor-gardens, S.W.*
- 1893 Brown, James William Bray, F.S.A.A.,
Corporation-st., Birmingham, & Moseley, Worcestershire.
- 1880 Browne, Edward William,
33, *Poultry, E.C.*
- 1875 Browne, Thomas Gillespie C., F.I.A.,
11, *Lombard-street, E.C.*
- 1892 Bruce, Lord Charles Frederick Brudenell,
Wolfhall Manor House, Marlborough.
- 1886 Bruce, Lord Henry Brudenell,
36, *Eaton-place, S.W.*
- 1886 *Brunner, John Tomlinson, M.P.,
Druid's Cross, Wavertree, Liverpool.
- 1865 Bunce, John Thackray,
Longworth, Priory-road, Edgbaston, Birmingham.
- 1880 *Burdett, Henry Charles,
The Lodge, Porchester-square, W.
- 1873 *Burdett-Coutts, The Right Hon. the Baroness,
1, *Stratton-street, W.*; and *Holly Lodge, Highgate, N.*
- 1884 Burdett-Coutts, William, M.P.,
1, *Stratton-street, Piccadilly, W.*
- 1885 Burridge, Arthur Francis, F.I.A.,
18, *Lincoln's Inn Fields, W.C.*
- 1886 Burrows, Abraham, J.P.,
Green Hall, Atherton, near Manchester
- 1880 Burt, Frederick, F.R.G.S.,
Woodstock, Crouch End, N.
- 1872 *Burton, The Right Hon. Lord, (*Chesterfield House, Mayfair, W.*); *Rangemore, Burton-on-Trent.*
- 1886 Bush, Baron William de, F.C.S.,
3, *Palace-gate, W.*
- 1893 *Bushill, Thomas William,
Brantwood, Coventry.

Year of Election.	
1891	Butler, Arthur J., <i>Dale Close, Mansfield, Notts.</i>
1892	Byworth, Charles Joseph, <i>Town Clerk, Cape Town, South Africa.</i>
1877	Campbell, George Lamb, <i>Market-street, Wigan.</i>
1879	Campbell-Colquhoun, Rev. John Erskine, <i>Chartwell, Westerham, Kent.</i>
1889	Cannan, Edwin, M.A., <i>24, St. Giles', Oxford.</i>
1891	Cannon, Henry W. (<i>Chase National Bank</i>), <i>15, Nassau-street, New York, U.S.A.</i>
1888	Carbutt, Sir Edward H., Bart., M. Inst. M.E., M. Inst. C.E., <i>19, Hyde Park-gardens, W.</i>
1881	Carden, Lionel Edward Gresley, <i>H.M. Consul, Mexico.</i>
1872	*Carillon, J. Wilson, F.S.A., F.R.G.S., <i>The Chimes, Richmond, Surrey.</i>
1887	Carmichael, Charles H. E., M.A., <i>Earlsmuir House, Mirabel-road, Fulham, S.W.</i>
1885	Carmichael, Sir Thomas D. Gibson, Bart., <i>Castlecraig, Dolphinton, N.B.</i>
1893	*Carpenter, Henry Saunders, <i>Beckington House, Weigh-ton-road, Anerley, S.E.</i>
1888	Carr, Ebenezer, <i>24, Coleman-street, Bank, E.C.</i>
1893	Carr, William Robert Taylor, <i>Monument House, Monument-square, E.C.</i>
1888	Carruthers-Wain, William J., <i>Linden Lodge, Thornton Heath, Surrey.</i>
1890	*Carter, Eric Mackay, A.I.A., F.C.A., <i>33, Waterloo-street, Birmingham.</i>
1883	Carter, Joseph Robert, <i>67, Cromwell-avenue, Highgate, N.</i>
1878	*Casley, Reginald Kennedy, M.D., <i>Northgate-street, Ipswich.</i>
1885	Casson, William A., <i>12, Romola-road, Herne Hill, S.E.</i>
1883	Cater, J. J., <i>27, Clement's-lane, E.C.</i>

Year of Election	
1881	Causton, Richard Knight, M.P., 12, <i>Devonshire-place, Portland-place, W.</i>
1858	Chadwick, David, <i>The Poplars, Herne Hill, Dulwich, S.E.</i>
1869	CHADWICK, JOHN OLDFIELD, F.R.G.S., 95, <i>Finsbury-pavement, E.C.</i>
1884	Chailley-Bert, Joseph, 12, <i>Avenue Carnot, Paris.</i>
1888	Challis, William H., <i>Enfield, Middlesex.</i>
1880	*Chamberlain, The Right Honourable Joseph, M.P., F.R.S., 40, <i>Prince's-gardens, S.W.</i>
1886	Chamberlain, Richard, 39, <i>Cadogan-square, S.W.</i>
1886	Chapman, Samuel, F.I.Inst., <i>c/o Inter-Oceanic Railway, Mexico City (viâ New York).</i>
1892	*Chatham, James, F.I.A., F.F.A., <i>Inverleith Park House, Edinburgh.</i>
1851	*Cheshire, Edward, 3, <i>Vanbrugh Park, Blackheath, S.E.</i>
1853	Chisholm, David, F.I.A., F.S.A., 9, <i>Rillbank-terrace, Edinburgh.</i>
1886	*Chisholm, George Goudie, M.A., B.Sc., F.R.G.S., 26, <i>Dornton-road, Balham, S.W.</i>
1849	Clark, Gordon Wyatt, <i>Mickleham Hall, Dorking.</i>
1886	Clark, Henry James (<i>Government Statist of Trinidad</i>). <i>Port of Spain, Trinidad.</i>
1856	Clark, Sir John Forbes, Bart., <i>Tillypronie, Tarland, Aberdeen.</i>
1888	Clarke, Charles Goddard, <i>Ingleside, Elm Grove, Peckham, S.E.</i>
1871	Clarke, Ebenezer, <i>Grove-road-villas, Walthamstow.</i>
1882	*Clarke, Ernest, F.L.S., F.S.A., 10, <i>Addison-road, Bedford-park, Chiswick.</i>
1877	*Clarke, Henry, L.R.C.P., <i>H.M. Prison, Wakefield, Yorks.</i>
1890	Clarke, Henry, <i>Cannon Hall, Hampstead, N.W.</i>
1856	*CLARKE, HYDE, 32, <i>St. George's-square, S.W.</i>
1869	Cleghorn, John, 3, <i>Spring-gardens, S.W.</i>
1853	Clirehugh, William Palin, F.I.A., 66, <i>Cornhill, E.C.</i>
1888	Clough, Walter Owen, M.P., 89, <i>Gresham-street, E.C., and The Ridgway, Enfield.</i>
1889	Coate, James, <i>East Villa, Lyme-road, Axminster.</i>

Year of Election.	
1873	Cockle, Captain George, F.R.G.S., 9, <i>Bolton-gardens, South Kensington, S.W.</i>
1884	Cockshott, John James, 24, <i>Queen's-road, Southport.</i>
1887	Cohen, Nathaniel Louis, 31, <i>Throgmorton-street, E.C.</i>
1888	Coleman, Harry, 34, <i>Golden-square, W.</i>
1859	Coles, John, F.I.A., 39, <i>Throgmorton-street, E.C.</i>
1892	* Collet, Miss Clara Elizabeth, M.A., 7, <i>Coleridge-road, Finsbury Park, N.</i>
1887	Collet, Sir Mark Wilks, Bart., 2, <i>Sussex-square, W., and St. Clere, Sevenoaks, Kent.</i>
1882	* Collum, Rev. Hugh Robert, M.R.I.A., F.R.C.I., <i>Leigh, near Tunbridge, Kent.</i>
1867	Colman, Jeremiah James, M.P., <i>Carrow House, Norwich.</i>
1878	Colomb, Captain Sir John C. R., K.C.M.G., M.P., J.P., <i>Droumquinna, Kenmare, Kerry.</i>
1889	Compton, The Right Hon. Earl, M.P., 51, <i>Lennox-gardens, S.W.</i>
1888	Connell, Arthur Knatchbull, M.A., 20, <i>Elmtree-road, N.W.</i>
1891	Cooper, Joseph, 60, <i>Park-street, Farnworth, near Bolton.</i>
1874	Corbett, John, 20, <i>Hertford-street, Mayfair, W.</i>
1883	Corgialegno, M., <i>George-yard, Lombard-street, E.C.</i>
1873	Cork, Nathaniel, F.R.G.S., 18, <i>Birchin-lane, E.C.</i>
1889	Cornwallis, Fiennes Stanley Wykeham, M.P., <i>Linton-park, Maidstone, Kent.</i>
1880	Cotterell-Tupp, Alfred, 17, <i>Devonshire-terrace, Hyde Park, W.</i>
1862	Courtney, The Right Hon. Leonard Henry, M.A., M.P., 15, <i>Cheyne Walk, Chelsea, S.W.</i>
1882	Cowen, Charles, <i>Johannesburg, Transvaal, South Africa.</i>
1888	Craggs, John George, C.A., <i>Stone House, St. John's, S.E.</i>
1874	CRAIGIE, MAJOR PATRICK GEORGE (<i>Hon. Secretary</i>), 6, <i>Lyndhurst-rd., Hampstead, & 4, Whitehall-place, S.W.</i>
1870	Craik, George Lillie, 29, <i>Bedford-street, Strand, W.C.</i>
1889	Cramp, Charles Courtney, C.E.,
1890	Crawford, Richard Frederick, 4, <i>Whitehall-place, S.W.</i>

Year of Election	
1891	*Crawley, Charles Edward (<i>Controller General</i>), <i>Hyderabad, Deccan, India.</i>
1878	Crewdson, Ernest, <i>Platt Abbey, Rusholme, Manchester.</i>
1892	Cripps, Charles Alfred, Q.C., <i>32, Elm Park-gardens, S.W.</i>
1886	Crispin, Edward, <i>Royal Insurance Buildings, Dale-street, Liverpool.</i>
1890	Croal, David Octavius, <i>15, York-buildings, Adelphi, W.C.</i>
1875	Cunningham, David, C.E., <i>Works' Office, Harbour-chambers, Dundee.</i>
1883	Cunningham, Rev. William, M.A., D.D., <i>2, St. Paul's-road, Cambridge.</i>
1884	Curtis, Charles Edward, <i>26, Gledstanes-road, W. Kensington, W.</i>
1879	Curtis, Robert Leabon, F.S.I., J.P., <i>120, London Wall, E.C.</i>
1873	Czarnikow, Cæsar, <i>Effingham-hill, Dorking, Surrey.</i>
1886	Dale, David, <i>West Lodge, Darlington.</i>
1888	Dangerfield, Athelstan, A.C.A., <i>17, Basinghall-street, E.C.</i>
1880	DANVERS, FREDERICK CHARLES, <i>India Office, Westminster, S.W.</i>
1873	Danvers, Sir Juland, K.C.S.I., <i>103, Lexham-gardens, Kensington, W.</i>
1892	Dash, William Lawson, J.P., <i>301, Pitt-street, Sydney, N.S.W.</i>
1890	Davey, Robert Williams, B.A.,
1893	Davidson, Captain J. H. D., <i>31, Grenfell-street, Adelaide, S. Australia.</i>
1869	Davies, James Mair, <i>166, St. Vincent-street, Glasgow.</i>
1874	Davies, William Henry, <i>51, Tregunter-road, West Brompton, S.W.</i>
1893	Davis, Harrison, <i>20, Elm-park-gardens, S.W.</i>
1890	Dawson, A. L. Halkett, M.A., F.R.G.S., <i>Molesworth Chambers, Melbourne, Victoria.</i>
1888	Dawson, G. J. Crosbie, M. Inst. C.E., F.G.S. <i>North Staffordshire Railway, Stoke-upon-Trent.</i>

Year of Election.	
1880	Debenham, Frank, 26, <i>Upper Hamilton-terrace, St. John's Wood, N.W.</i>
1885	De Broë, Emile Conrad De Bichin, <i>Walden Lodge, College Park, Wandsworth-common, S.W.</i>
1879	*De Ferrieres, The Baron Du Bois, J.P., <i>Bay's-hill House, Cheltenham.</i>
1883	*De Keyser, Sir Polydore (Alderman), <i>Chatham House, Grove-road, Clapham Park, S.W.</i>
1877	Deloitte, William Welch, 4, <i>Lothbury, E.C.</i>
1891	Denne, William, <i>Statistical Department, Custom House, E.C.</i>
1873	Dent, Edward, <i>Fernacres, Fulmer, near Slough, Bucks.</i>
1887	Dent, George Middlewood, 13, <i>Chambres-road, Southport.</i>
1889	De Rothschild, Leopold, J.P., D.L. (Alderman), 5, <i>Hamilton-place, Piccadilly, W.</i>
1892	De Smidt, Henry (Permanent Under-Secretary), <i>Cape Town, Cape Colony.</i>
1877	Dever, Henry, 4, <i>Lothbury, E.C.</i>
1892	Dewar, William Nimmo, 163, <i>Queen-street, Melbourne, Victoria.</i>
1889	De Woolfson, Louis Estevan Green, <i>St. John's-hill, Shrewsbury.</i>
1877	De Worms, The Right Hon. Baron Henry, M.P., F.R.A.S., <i>Carlton Club, Pall Mall, S.W.</i>
1885	Dibley, Captain George, 4, <i>St. George's-square, S.W.</i>
1890	Dickinson, Willoughby Hyett, 4, <i>Culverden-road, Balham, S.W.</i>
1866	*Dilke, The Right Hon. Sir C. Wentworth, Bart., M.P., LL.M., 76, <i>Sloane-street, S.W.</i>
1873	Dixon, George, M.P., <i>The Dales, Edgbaston, Birmingham.</i>
1889	Double, Alfred, 25, <i>Jewin-crescent, Cripplegate, E.C.</i>
1889	Doubleday, William Bennett, 123, <i>Tulse-hill, S.W.</i>
1889	Douglas, J., <i>E.I. Railway House, Dalhousie Square, Calcutta.</i>
1875	Doxsey, Rev. Isaac, 186, <i>The Grove, Camberwell, S.E.</i>
1878	Doyle, Patrick, C. E., F.G.S., M.R.A.S., <i>Calcutta.</i>
1890	Drummond, Charles James, 21, <i>Dalmore-road, West Dulwich, S.E.</i>
1875	Dun, John, <i>Parr's and Alliance Bank, Bartholomew-lane, E.C.</i>

Year of
Election.

- 1886 Dundonald, The Right Hon. the Earl of,
34, *Portman-square W.*
- 1878 *Dunraven, The Right Hon. The Earl of, K.P.,
Kenry House, Putney Vale, S.W.
- 1885 Dyer, William John,
17, *Montpelier-row, Blackheath, S.E.*
- 1888 Earnshaw, Jacob,
36, *South King-street, Manchester.*
- 1887 Ebbsmith, Joseph,
86, *St. James's-street, S.W.*
- 1888 Eckersley, J. C., M.A., F.R.G.S.,
Ashfield, Wigan.
- 1883 Edgeworth, Professor Francis Ysidro, M.A., D.C.L.,
5, *Mount Vernon, Hampstead, and All Soul's, Oxford.*
- 1869 Edmonds, William,
Annesley House, Southsea.
- 1880 Egerton of Tatton, The Right Honourable Lord,
7, *St. James's-square, S.W.*
- 1872 Elliot, Sir George, Bart., M.P.,
17, *Portland-place, W.*; 23, *Gt. George-street, S.W.*
- 1885 Elliot, William Henry,
122, *Mansion House-chambers, Queen Victoria-street, E.C.*
- 1885 ELLIOTT, THOMAS HENRY (*Vice-President*),
Board of Agriculture, 4, Whitehall Place, S.W.
- 1885 Elliott, William,
22, *St. George's-street, Cape Town.*
- 1877 Emiaott, W. T.,
New Bridge-street, Manchester.
- 1888 Emson, Reginald Embieton,
Hazelmere, Glen Eldon-road, Streatham, S.W.
- 1889 Erhardt, William,
7, *Bury-street, Bloomsbury, W.C.*
- 1882 Essex, Benjamin Smily,
17, *Pall Mall East, S.W.*
- 1879 Evans, Henry Jones, J.P.,
Greenhill, Whitchurch, Cardiff.
- 1892 Faber, Harald,
Fiona, Lennard-road, Penge, S.E.

Year of Election.	
1875	Faraday, Frederick J., 17, <i>Brazennose-street, Manchester.</i>
1888	Farlow, A. R. King, 4, <i>King-street, Cheapside, E.C.</i>
1889	Farnworth, Edward James, 20, <i>Cannon-street, Preston.</i>
1891	Farquharson, J. C., <i>Railway Department, Colombo, Ceylon.</i>
1878	Farren George, J.P., M.Inst.C.E., <i>Carnarvon.</i>
1878	Farrer, The Right Hon. Lord, 24A, <i>Bryanston-square, W. ; Abinger Hall, Dorking.</i>
1890	Faulks, Joseph Ernest, B.A., F.I.A., 187, <i>Fleet-street, E.C.</i>
1893	*Fawcett, Mrs. Millicent Garrett, 2, <i>Gower-street, W.C.</i>
1882	Fell, Arthur, M.A., 46, <i>Queen Victoria-street, E.C.</i>
1864	Fellows, Frank Perks, 8, <i>The Green, Hampstead, N.W.</i>
1888	Fellows, James I., <i>Saxon Hall, Palace-court, Kensington Gardens, W.</i>
1887	Fenton, James J., <i>Office of the Government Statist, Melbourne, Victoria.</i>
1893	Fenwick, John Fenwick, <i>Spencer House, Wimbledon Common.</i>
1880	Finlaison, Alexander John, C.B., F.I.A., 19, <i>Old Jewry, E.C.</i>
1889	*Finlay, Major Alexander, <i>The Manor House, Little Brickhill, Bletchley, Bucks.</i>
1884	*Finnemore, Robert Isaac, J.P., F.R.G.S., <i>Durban, Natal, South Africa</i>
1892	Fisher, George, J.P., M.H.R. (<i>Chevalier of the Order of Crown of Italy</i>), <i>Hill-street, Wellington, N.Z.</i>
1888	Fisher, Walter Newton, F.C.A., 4, <i>Waterloo-street, Birmingham.</i>
1892	Fitzgerald, Lieut.-Colonel R. Purefoy, J.P., <i>North Hall, Basingstoke.</i>
1885	*Fitz-Gerald, Lt.-Col. Wm. G., M.A., F.R. Hist. S., F.R.S. L., <i>Conneragh, Youghal, Ireland.</i>
1893	Flux, Alfred William, M.A., <i>Owen's College, Manchester.</i>
1882	Foley, Patrick James, M.P., <i>Pearl Ins. Co., Adelaide-place, London Bridge, E.C.</i>
1889	Foot, Alfred, <i>Liskeard, 15, Epsom-road, Croydon.</i>
1841	Fortescue, The Right Honourable Earl, <i>Castle Hill, South Molton, Devon.</i>
1893	Fortune, David, 104, <i>Peel-terrace, Garnethill, Glasgow.</i>

Year of Election.	
1888	Forwood, Sir William B., J.P., <i>Blundell Sands, Liverpool.</i>
1884	Fosbery, William Thomas Exham, <i>The Castle-park, Warwick.</i>
1868	Fowler, William, <i>43, Grosvenor-square, W.</i>
1890	Fox, Charles Allen, M.R.C.S., <i>Aberthin, near Cowbridge, S. Wales.</i>
1893	Fox, Stephen Newcome, <i>12, Cromwell-crescent, South Kensington, S.W.</i>
1878	Foxwell, Professor H. Somerton, M.A., <i>St. John's College, Cambridge.</i>
1887	Frankland, Frederick William, F.I.A. <i>New York Life Office, 346, Broadway, New York.</i>
1893	Franklin, Ernest L., <i>60, Old Broad-street, E.C.</i>
1886	Fream, Professor William, B.Sc., Lond., LL.D., F.L.S., F.G.S., <i>The Vinery, Downton, Salisbury.</i>
1887	Freeman, Thomas, F.G.S., <i>35, Whitehall-park, N.</i>
1890	Freestone, John, <i>West Bridgford, Nottingham.</i>
1886	Fuller, George Pargiter, M.P., <i>Neston-park, Corsham, Wilts.</i>
1878	Fuller, William Palmer, <i>Portland House, Basinghall-street, E.C.</i>
1893	Gadsden, Arthur Horace, <i>Woodcote, Somerset-road, Ealing Dean, W.</i>
1879	Gairdner, Charles, <i>Broom, Newton Mearns, Renfrewshire.</i>
1852	Galsworthy, Sir Edwin Henry, J.P., <i>26, Sussex-place, Regent's-park, N.W.</i>
1873	*Galton, Capt. Sir Douglas, K.C.B., D.C.L., LL.D., F.R.S., <i>12, Chester-street, Grosvenor-place, S.W.</i>
1860	Galton, Francis, F.R.S., F.R.G.S., <i>42, Rutland-gate, S.W.</i>
1887	Garccke, Emile, <i>21, Priory-road, Bedford-park, Chiswick.</i>
1889	Garland, Nicholas Surrey, <i>Finance Department, Ottawa, Canada.</i>

Year of Election	
1881	GARNETT, FREDERICK BROOKSBANK, C.B., 4, <i>Argyll-road, Kensington, W.</i>
1879	*GASSIOT, John Peter, J.P., <i>The Culvers, Carshalton, Surrey,</i>
1883	Gates, Jacob S., <i>St. George's House, Eastcheap, E.C.</i>
1880	*Gates, John Benjamin, A.C.A., 47, <i>Warwick-street, Regent-street, W.</i>
1881	*GATTY, William Henry, <i>Market Harborough, Leicestershire.</i>
1885	Gibb, George S., <i>North-Eastern Railway Company, York.</i>
1872	Gibb, Thomas Eccleston, 16, <i>Lady Margaret-road, N.W.</i>
1874	Gibbs, Alban George Henry, M.P., 82, <i>Portland-place, W.</i>
1871	Gibbs, George Sleight, 45, <i>Northgate, Darlington.</i>
1889	Gibson, George Rutledge, 55, <i>Broadway, New York City, U.S.A.</i>
1867	*GIFFEN, ROBERT, C.B., LL.D., F.R.S. (<i>Hon. Vice-President</i>), 44, <i>Pembroke-road, Kensington, W.</i>
1877	Gilbert, William H. Sainsbury, 62, <i>Old Broad-street, E.C.</i>
1878	*GLANVILLE, Silvanus Goring, 39, <i>Vicar's-hill, Lewisham, S.E.</i>
1860	Glover, John, J.P., 88, <i>Bishopsgate-street Within, E.C.</i>
1888	Goad, Charles E., M. Am. Soc. C.E., M. Can. Soc. C.E., 53, <i>New Broad-street, E.C., and Montreal, Canada.</i>
1884	*GONNER, Professor Edward C.K., M.A., <i>University College, Liverpool.</i>
1877	Good, Alfred, 57, <i>Moorgate-st., E.C.; Downe Lodge, Beckenham, Kent.</i>
1886	Goodrich, Harry St. Aubyn, 5, <i>Herbert-crescent, Hans-place, S.W.</i>
1885	Goodsall, David Henry, F.R.C.S., 17, <i>Devonshire-place, W.</i>
1892	Goodwin, Alfred, M.A., 2, <i>Charles-road, St. Leonards, Sussex.</i>
1868	GOSCHEN, THE RIGHT HON. GEORGE JOACHIM, M.P., (<i>Honorary Vice-President</i>), 69, <i>Portland-place, W., and Seacox-heath, Hawkhurst.</i>
1855	*GOSSET, John Jackson, <i>Thames Ditton, Surrey.</i>
1885	Goulding, William Purdham, F.S.I., 41, <i>Moorgate-street, E.C.; and 18, Mercers-road, N.</i>
1887	Gover, Frederic Field, <i>Casino House, Herne Hill, S.E.</i>

Year of
Election.

- 1853 Gover, William Sutton, F.I.A.,
4, *Queen-street-place, Southwark Bridge, E.C.*
- 1887 Graves, The Rev. Michael, B.A.,
Sir W. Borlase's School, Great Marlow.
- 1888 Green, Joseph Shaw,
18, *King Street, Warrington.*
- 1887 Gribble, George J.,
Henlam Grange, Biggleswade.
- 1883 Griffin, Josiah,
Vanbrugh Park, Blackheath, S.E.
- 1868 Griffith, Edward Clifton,
Reliance Office, 71, King William-street, E.C.
- 1884 Griffith, His Honour T. Risely, C.M.G.,
Government House, Mahé, Seychelles, viâ Marseilles.
- 1889 Grigsby, William Ebenezer, M.A., LL.D.,
- 1883 Grimshaw, Thomas Wrigley, M.D., M.A.,
(*Registrar-General of Ireland*),
Priorsland, Carrickmines, Co. Dublin.
- 1886 GRIMSTON, THE RIGHT HON. VISCOUNT,
Cell Barnes, St. Albans.
- 1889 Grosvenor, George,
Holywell, Streatham-common, S.W.
- 1888 Grosvenor, The Hon. Norman de l'Aigle,
30, *Upper Grosvenor-st., W.; Moor-park, Rickmansworth.*
- 1883 Gunther, Charles,
9, *Fenchurch-avenue, E.C.*
- 1878 Guthrie, Charles, F.C.A.,
London Chartered Bank of Australia, Melbourne, Victoria.
- 1885 Guthrie, Edwin,
Victoria Park, Manchester.
- 1887 Guyot, Yves (*Deputé*),
95, *Rue de Seine, Paris.*
- 1880 *Gwynne, James Eglinton A., J.P., F.S.A.,
97, *Harley-st., W.; Folkington Manor, Polegate, Sussex.*
- 1887 Gwyther, John Howard,
34, *Belsize-park-gardens, N.W.*
- 1884 Haas, Hendrik Christiaan,
32, *Fenchurch-street, E.C.*
- 1892 Haddan, Herbert John,
18, *Buckingham-street, Strand, W.C.*

Year of Election	
1892	Hadfield, Robert A. <i>Fairfield, Sheffield.</i>
1884	Hadley, Joseph, 5, <i>Argyll-place, Regent-street, W.</i>
1873	*Haggard, Frederick T., 1, <i>Broadwater Down, Tunbridge Wells.</i>
1884	Hague, John, <i>King-street, Toronto, Canada.</i>
1887	Haldeman, Donald Carmichael, <i>Claremont, Gypsy Hill, S.E.</i>
1883	Hall, Sir John, K.C.M.G., <i>Hororata, Canterbury, New Zealand.</i>
1890	Hall, Joseph Castle, 2, <i>Basinghall-street, E.C.</i>
1878	Hallett, Thomas George Palmer, M.A., <i>Claverton Lodge, Bath.</i>
1887	Hamilton, Edward W., C.B., <i>The Treasury, Whitehall, S.W.</i>
1873	Hamilton, The Right Hon. Lord George Francis, M.P., 17, <i>Montagu-street, Portman-square, W.</i>
1883	Hamilton, James Thomas, 22, <i>High-street, Southampton.</i>
1879	HAMILTON, ROWLAND, (Vice-President), <i>Oriental Club, Hanover-square, W.</i>
1887	Hamilton, Thomas, J.P., 46, <i>Parliament-hill-road, Hampstead, N.W.</i>
1884	*Hammersley, Hugh Greenwood, 14, <i>Chester-square, S.W.</i>
1885	*Hancock, Charles, M.A., 2 <i>Cloisters, Temple, E.C.; and Reform Club, S.W.</i>
1875	Hankey, Ernest Alers, 91, <i>St. Ermin's Mansions, Victoria-street, S.W.</i>
1876	Hansard, Luke, 68, <i>Lombard-street, E.C.</i>
1871	*Harcourt, Right Hon. Sir William Vernon, Q.C., M.P., F.R.S., <i>Reform Club, S.W.</i>
1886	*Hardcastle, Basil William, <i>Beechenden, Hampstead, N.W.</i>
1886	Hardcastle, E. J., <i>Oriental Club, Hanover-square, W.</i>
1877	Harding, Colonel Charles, F.R.G.S., 10, <i>St. Swithin's-lane, E.C.</i>
1883	Harding, G. P., <i>La Chaumière, Trouville S./M. France.</i>
1884	Hardy, George Francis, F.I.A., 5, <i>Whitehall, S.W.</i>
1883	Hardy, William Henry, F.C.A., 5, <i>Great Winchester-street, E.C.</i>
1893	Harrap, Thomas, 143, <i>Stamford-street, Ashton-under-Lyne, Lancs.</i>

Year of
Election.

- 1891 Harris, Arthur Wellesley, M.R.C.S., L.S.A., D.P.H.,
High-street, Southampton.
- 1868 Harris, David,
Caroline Park, Granton, Edinburgh.
- 1887 Harris, William A., F.R.S.S.A.,
Phoenix Chambers, Exchange, Liverpool.
- 1882 Harris, William James,
Halwill Manor, Beaworthy, N. Devon.
- 1890 Harrison, Rev. Arthur, B.A., F.R.S.L.
Colan Vicarage, St. Columb, Cornwall.
- 1889 Harrold, Major Arthur Lucas,
Adelaide, South Australia.
- 1887 Harrold, Leonard F., F.R.G.S.,
29, Great St. Helens, E.C.
- 1884 Hart, James,
16, Philpot-lane, E.C.
- 1881 Harvey, Alfred Spalding, B.A.,
67, Lombard-street, E.C.
- 1884 Harvey, Thomas Morgan,
Portland House, Basinghall-street, E.C.
- 1876 Hawkins, Alfred Templeton, F.R.G.S.,
30, Budge-row, Cannon-street, E.C.
- 1880 Hazell, Walter,
15, Russell-square, W.
- 1887 *Heap, Ralph, jun.,
1, Brick-court, Temple, E.C.
- 1884 Hedley, Robert Wilkin,
31a, Colmore-row, Birmingham.
- 1870 Hefford, George V.,
Rugby.
- 1883 Heilgers, Robert Philip,
22, Great St. Helens, E.C.
- 1889 *Hemming, Arthur George, F.I.A.,
46, Comeragh-road, West Kensington, W.
- 1865 Hendriks, Augustus, F.I.A.,
7, Cornhill, E.C.
- 1855 *HENDRIKS, FREDERICK, F.I.A.
7, Vicarage-gate, W., and 1, King William-street, E.C.
- 1888 Heriot, George,
1, Whittington House, Leadenhall-street, E.C.
- 1881 Hewat, Archibald, F.I.A., F.F.A.,
22, George-street, Edinburgh.
- 1890 Hewins, W. A. S., B.A.,
26, Leckford-road, Oxford.
- 1892 Hey, William Henry,
200, New Kent-road, S.E.
- 1834 *HEYWOOD, JAMES, M.A., F.R.S., F.G.S.
(Honorary Vice-President and Trustee),
26, Palace-gardens, Kensington, W.; Athenæum Club, S.W.

Year of Election.	
1886	Hibbert, H. F., 8, <i>Park-road, Chorley, Lancashire.</i>
1869	Hickson, Sir J., J.P. (<i>General Manager Grand Trunk Ry.</i>), <i>Grand Trunk Railway, Montreal, Canada.</i>
1892	Higgs, Henry, LL.B., 164, <i>Brixton-hill, S.W.</i>
1878	*Hill, Frederick Morley, 22, <i>Richmond-road, Barnsbury, N.</i>
1878	Hillingdon, The Right Hon. Lord, <i>Camelford House, Park-lane, W.</i>
1890	Hinde, Frederick, <i>Darley Dale, Kent House-road, Beckenham.</i>
1879	Hoare, H. N. Hamilton, 37, <i>Fleet-street, E.C.</i>
1870	*Hoare, Henry, 22, <i>Bryanston-square, W.</i>
1889	Hogg, Quintin (Alderman), 5, <i>Cavendish-square, W.</i>
1892	Hole, James, 1, <i>Great College-street, S.W.</i>
1888	Hollams, John, 52, <i>Eaton-square, S.W.</i>
1888	Hollington, Alfred J., <i>Aldgate, London, E.</i>
1884	Hollond, John Robert, <i>Reform Club, S.W.</i>
1891	Hooker, Sir Joseph Dalton, K.C.S.I., F.R.S., &c., <i>The Camp, Sunningdale.</i>
1879	Hooper, George Norgate, <i>Elmleigh, Hayne-road, Beckenham, Kent.</i>
1878	Hooper, Wynnard, 13, <i>Sumner-place, Onslow-square, S.W.</i>
1887	Hopkins, John, <i>Little Boundes, Southborough, Kent.</i>
1890	Howarth, William, F.R. Hist. S., 10, <i>Clifford's Inn, E.C.</i>
1888	Howell, Edward J., <i>Kingston House, Caterham Valley, Surrey.</i>
1883	Howell, Francis Buller, 2, <i>Middle Temple-lane, E.C.</i>
1883	Howell, George, M.P., <i>Hampden House, Ellingham-road, Shepherd's Bush, W.</i>
1864	Hudson, Thomas, 31, <i>Bonham-road, Brixton-hill, S.W.</i>
1878	Hughes, John, 16, <i>Finsbury-circus, E.C.</i>
1872	Humphreys, George, M.A., F.I.A.,
1874	HUMPHREYS, NOEL ALGERNON, <i>General Register Office, Somerset House, Strand, W.C.</i>

Year of Election.	
1893	Humphreys-Owen, Arthur Charles, J.P., <i>Glansevern, Garthmyl, Montgomeryshire.</i>
1883	Hunt, Richard Aldington, A.I.A., <i>Moor-street, Birmingham.</i>
1888	Hunter, George Burton, <i>Wallsend-on-Tyne.</i>
1885	Hunter, William Alfred, LL.D., M.P., <i>2, Brick-court, Temple, E.C.</i>
1857	Hurst, George, <i>King's Brook House, St. Mary's, Bedford.</i>
1890	Huth, Ferdinand M., <i>12, Tokenhouse-yard, E.C.</i>
1888	Hyde, Clarendon G., M.A., B.L., <i>4, Pump-court, Temple, E.C.</i>
1887	Hyde, Henry Barry, <i>5, Eaton-rise, Ealing, W.</i>
1893	Hyde, John, <i>Census Office, Department of Interior, Washington, U.S.A.</i>
1874	*Ingall, William Thomas Fitzherbert Mackenzie, <i>6, Drapers'-gardens, E.C.</i>
1869	*Inglis, Cornelius, M.D., <i>Athenæum Club, S.W.</i>
1888	*Ionides, Alexander A., <i>1, Holland Park, W.</i>
1887	Irvine, Somerset William D'Arcy, J.P., <i>Equitable Life Office of United States, Brisbane.</i>
1864	*Ivey, George Pearse, <i>39, Denmark-villas, West Brighton.</i>
1885	Jackson, Henry, <i>158, The Common, Peckham Rye, S.E.</i>

Year of Election.	
1880	*Jackson, The Right Hon. William Lawies, M.P., <i>Chapelallerton, Leeds.</i>
1879	Jamieson, George Auldjo, <i>37, Drumsheugh-gardens, Edinburgh.</i>
1872	JANSON, FREDERICK HALSEY, F.L.S., <i>41, Finsbury-circus, E.C.</i>
1878	Jeans, J. Stephen, <i>29, Great George-street, S.W.</i>
1890	Jepson, John,
1881	*Jersey, The Right Hon. the Earl of, P.C., <i>Osterley-park, Isleworth.</i>
1892	Johnson, Charles Henry, B.A.,
1881	Johnson, Edwin Eltham, <i>110, Cannon-street, E.C.</i>
1891	Johnson, George, <i>2, The Avenue, Durham.</i>
1888	Johnson, John Grove, <i>23, Cross-street, Finsbury, E.C.</i>
1880	Johnson, Walter, <i>Rounton Grange, Northallerton.</i>
1872	Johnston, Francis John, <i>Lamas, Chislehurst.</i>
1891	Johnston, Robert M., F.L.S., (<i>Government Statist of Tasmania</i>), <i>Hobart, Tasmania.</i>
1883	Johnston, Thomas, <i>Broomsleigh-park, Seal, Sevenoaks.</i>
1878	Johnstone, Edward, <i>Nightingale-lane, Clapham-common, S.W.</i>
1884	*Jones, Edwin, J. P., <i>141, Cannon-street, E.C.</i>
1878	Jones, Henry R. Bence, B.A., <i>Board of Trade, Whitehall-gardens, S.W.</i>
1874	Jones, Herbert, <i>15, Montpelier-row, Blackheath, S.E.</i>
1888	Jones, J. Mortimer, <i>153, Highbury New-park, N.</i>
1887	Jones, John Walter, <i>58, Cheapside, E.C.</i>
1887	Jones, Lewis Davies,
1877	Jones, Theodore Brooke, <i>70, Gracechurch-street, E.C.</i>
1888	*Jordan, William Leighton, <i>25, Jermyn-street, S.W.</i>
1858	Jourdan, Francis, <i>14, Gledhow-gardens, South Kensington, S.W.</i>

Year of
Election

- 1890 Joyner, Robert Batson,
Poona, India.
- 1889 Justican, Edwin, F.I.A.,
St. Mildred's House, Poultry, F.C.
- 1873 Kay, Duncan James,
Drumpark, Dumfries, N.B.
- 1885 Keen, William Brock,
3, Church-court, Old Jewry, E.C.
- 1874 Kelly, Charles, M.D., F.R.C.P.,
Worthing, Sussex.
- 1884 Kelly, Edward Festus,
51, Great Queen-street, Lincoln's-inn-fields, W.C.
- 1867 Kelly, Edward Robert, A.M.,
51, Great Queen-street, Lincoln's-inn-fields, W.C.
- 1883 KELTIE, JOHN SCOTT, F.R.G.S.,
Glendevon House, Cempayne-gardens, West Hampstead.
- 1884 Kemp, John,
46, Cannon-street, E.C.
- 1884 *Kennedy, Sir Charles Malcolm, K.C.M.G., C.B.,
4, Louisa-terrace, Exmouth, South Devon.
- 1886 Kennedy, John Gordon,
Foreign Office, S.W.
- 1878 Kennedy, J. Murray,
New University Club, St. James's-street, S.W.
- 1881 *Kennett-Barrington, Sir V. Hunter, M.A., LL.M.,
65, Albert Hall Mansions, S.W.
- 1883 *Keynes, John Neville, M.A., D.Sc.
6, Harvey-road, Cambridge.
- 1884 Kimber, Henry, M.P.,
79, Lombard-street, E.C.
- 1852 Kimberley, The Right Honourable the Earl of, M.A., P.C.,
35, Lowndes-square, S.W.
- 1883 *King, Bolton, B.A.,
Toynbee Hall, 28, Commercial-street, E.
- 1884 Kirby, Horace Woodburn, F.C.A.,
19, Birchin-lane, E.C.
- 1888 *Kitson, Sir James, Bart., M.P., J.P.,
Gledhow Hall, Leeds.
- 1889 Kloetgen, W. J. H.,
16, Watling-street, E.C.

Year of Election.	
1889	Klugh, Arthur George, F.S.A.A.,
1878	*Kusaka, Yoshio, <i>First National Bank, Tokio, Japan.</i>
1885	Latham, Baldwin, M. Inst. C.E., <i>Duppas House, Old Town, Croydon.</i>
1892	Latham, Stanley A., A.C.A., <i>4, Essex-court, Temple, E.C.</i>
1874	Lawes, Sir John Bennett, Bart., LL.D., F.R.S., F.C.S., <i>Rothamsted-park, St. Albans.</i>
1891	Lawrence, James, <i>8, Tenter-terrace, Morpeth.</i>
1873	LAWSON, ROBERT, LL.D. (<i>Inspector-General of Army Hos- pitals</i>), 4, <i>Carden-place, Aberdeen.</i>
1891	Lawson, Robertson, <i>34, Old Broad-street, E.C.</i>
1890	Lawson, William Ramage, <i>57, Fitzjohn's-avenue, Hampstead, N.W.</i>
1883	*Leadam, Isaac Saunders, M.A., <i>1, The Cloisters, Temple, E.C., and Reform Club, S.W.</i>
1890	Leakey, James, <i>256, Burdett-road, E.</i>
1886	Leathes, Stanley M., <i>Trinity College, Cambridge.</i>
1883	Lee, Henry, <i>Reform Club, S.W.</i>
1886	*Lee, Sir Joseph C., <i>Mosley-street, Manchester.</i>
1879	*Leete, Joseph, <i>36, St. Mary-at-hill, E.C., & Eversden, S. Norwood-park.</i>
1877	LEFEVRE, THE RIGHT HON. GEORGE SHAW, M.P., M.A., J.P. (<i>Honorary Vice-President</i>), <i>18, Bryanston-square, W.</i>
1877	*Leggatt, Daniel, LL.D., <i>5, Raymond-buildings, Gray's-inn, W.C.</i>
1880	Leighton, Stanley, M.P., <i>Sweeney Hall, Oswestry, Salop.</i>
1887	Leitch, Alexander, <i>17, King William-street, E.C.</i>
1892	Leon, Herbert Samuel, M.P., <i>Bletchley Park, Bletchley, Bucks.</i>
1888	*Le Poer-Trench, Col. The Hon. W., R.E., J.P., <i>3, Hyde Park-gardens, W.</i>

Year of
Election.

- 1887 *Le Roy-Lewis, Herman, B.A. (*Trinity College, Cambridge*),
Westbury House, Petersfield, Hants.
- 1889 Lescher, Herman,
6, *Clement's-lane, Lombard-street, E.C.*
- 1862 Lewis, Robert,
1, *Bartholomew-lane, E.C.*
- 1888 *Liberty, A. Iasenby,
The Manor House, The Lee, near Gt. Missenden, Bucks.
- 1877 Ligertwood, Thomas, M.D., F.R.C.S.,
Royal Hospital, Chelsea, S.W.
- 1884 *Lines, William Edward,
c/o R. S. Lines, Noel House, Hertford.
- 1892 Llewelyn, Sir John T. D., Bart.,
Penllergare, Swansea.
- 1878 Lloyd, Thomas,
20, *Bucklersbury, E.C.*
- 1879 Lloyd, Wilson, M.P., F.R.G.S.,
Myvot House, Wood-green, Wednesbury.
- 1888 LOCH, CHARLES S., B.A. (*Vice-President*),
Hedge Row Cottage, Queen Anne's-gardens, Bedford-park.
- 1882 *LONGSTAFF, GEORGE BLUNDELL, M.A., M.D., F.R.C.P.,
Highlands, Putney Heath, S.W.
- 1876 *Lornie, John Guthrie, J.P. (*of Birnam and Pitcastle*),
Rosemount, Kirkcaldy, N.B.
- 1892 Lough, Thomas, M.P.,
Bedford Park.
- 1834 Lovelace, The Right Honourable the Earl of, F.R.S.,
East Horsley-park, Ripley, Surrey.
- 1886 *Low, Malcolm,
22, *Roland-gardens, S.W.*
- 1889 Lowies, John,
Hill-crest, Darenth-road, Stamford-hill, N.
- 1865 LUBBOCK, THE RIGHT HON. SIR JOHN, BART., M.P., F.R.S.
(*Trustee*),
High Elms, Beckenham, Kent.
- 1878 Lucas, Sir Thomas, Bart., J.P.,
37, *Great George-street, Westminster, S.W.*
- 1885 Luckie, David Mitchell, J.P.,
Wellington, New Zealand.
- 1875 *Mabson, Richard Rous,
20, *Bucklersbury, E.C.*

Year of Election.	
1873	*Macandrew, William, J.P., <i>Westwood House, near Colchester.</i>
1873	McArthur, Alexander, M.P., <i>79, Holland-park, W.</i>
1890	McAulane, James (<i>Dunster House, Mincing-lane, E.C.</i>), <i>Glenrose, Balham Park-road, S.W.</i>
1891	MacBrayne, John Burns, <i>17, Royal Exchange-square, Glasgow.</i>
1884	McCabe, William, LL.B., F.I.A., <i>Drawer 2,591, Toronto, Canada.</i>
1888	McCankie, James, <i>63, George-street, Edinburgh.</i>
1867	M'Clean, Frank. <i>Rusthall House, Tunbridge Wells.</i>
1892	McCleery, James C., <i>11, Dale-street, Liverpool.</i>
1873	McDermott, Edward,
1887	Macdonald, Andrew J., <i>40, Threadneedle-street, E.C.</i>
1872	Macdonell, John, LL.D., <i>Room 183, The Royal Courts of Justice, Strand, W.C.</i>
1873	*McEwen, Laurence T., <i>c/o. R. A. McLean, 1, Queen Victoria-street, E.C.</i>
1890	McKay, Andrew Davidson, <i>13, York-street, Liverpool.</i>
1886	*Mackenzie, Colin, F.R.G.S.,
1878	McKewan, William. <i>Elmfield, Bickley, Kent.</i>
1893	Mackinney, Frederick Walker, <i>London County Council, Spring Gardens, S.W.</i>
1876	*McLean, Robert Allan, F.R.G.S., <i>1, Queen Victoria-street, E.C.</i>
1863	*Maclure, John William, M.P., J.P., D.L., <i>Carlton Club; The Home, Whalley Range, Manchester.</i>
1888	McNiel, Henry, <i>5, Cross-street, Manchester.</i>
1875	Macpherson, Hugh Martin, F.R.C.S. (<i>Inspector-General</i>), <i>14, St. James's-square, S.W.</i>
1887	Macpherson, Walter Charles Gordon, <i>Howrah, E.I.R., Bengal, India.</i>
1883	Macqueen, Robert Davidson Barkly, <i>20, Upper Addison-gardens, Kensington, W.</i>
1882	MacRosty, Alexander, <i>West Bank, Esher.</i>
1889	McVail, John C., M.D., &c., <i>2, Strathallan-terrace, Dowanhill, Glasgow.</i>
1891	Maidment, Thomas, <i>1, Gloucester-terrace, Southsea.</i>

Year of Election.	
1887	Makower, Maurice, 11, <i>Randolph-crescent, Maidu Vale, W.</i>
1887	Malleson, Frank R., <i>Dixton Manor House, Winchcombe, Cheltenham.</i>
1887	Mann, William Edward, 23, <i>Jewin-street, E.C.</i>
1884	*Manson, Frederick William, <i>Wellfield, Muswell Hill, N.</i>
1888	Manuel, James, <i>c/o The London and Provincial Bank, Cardiff.</i>
1877	*Maple, Sir John Blundell, M.P., 8, <i>Clarence-terrace, Regent's-park, N.W.</i>
1889	Marks, Harry H., <i>Loudoun Hall, N.W.</i>
1875	Marsh, Alfred, 85, <i>Gracechurch-street, E.C.</i>
1880	*Marshall, Professor Alfred, M.A., <i>Balliol Croft, Madingley-road, Cambridge.</i>
*1887	Marshall, W. Bayley, M.Inst.C.E., M.Inst.M.E.
1887	Martin, James, 4, <i>King-street, Cheapside, E.C.</i>
1874	*MARTIN, JOHN BIDDULPH, M.A., F.Z.S. (<i>Trustee, Honorary Secretary, and Hon. Foreign Secretary</i>), 17, <i>Hyde-park-gate, S.W.</i>
1872	*MARTIN, RICHARD BIDDULPH, M.A., M.P. (<i>Treasurer</i>), 68, <i>Lombard-street, E.C., and Chislehurst.</i>
1876	*Martin, Thomas Jaques, 84, <i>Collins-street West, Melbourne, Victoria</i>
1879	Martin, Waldyve Alex. Hamilton, <i>The Upper Hall, Ledbury, Herefordshire.</i>
1884	Mason, William Arthur, 31a, <i>Colmore-row, Birmingham.</i>
1875	*Mathers, John Shackleton, <i>Hanover House, Leeds, Yorkshire.</i>
1883	Mathieson, Frederic Coxhead, <i>Beechworth, Hampstead, N.W.</i>
1891	Maxwell, Robert George, <i>P.O. Box, 299, Cape Town.</i>
1882	Medhurst, John Thomas, <i>Clay-hill, White Hart-lane, Tottenham.</i>
1883	*Medley, George Webb, 21, <i>Park-street, Park-lane, W.</i>
1853	*Meikle, James, F.I.A., 6, <i>St. Andrew's-square, Edinburgh.</i>
1890	Merriman, Hon. John Xavier, <i>Cape Town, Cape of Good Hope.</i>
1884	Merton, Zachary, 18, <i>Chesham-place, S.W.</i>

Year of Election.	
1873	Millar, William Henry, <i>Cleveland Lodge, New Park-road, Brixton-hill, S.W.</i>
1890	Miller, Gordon William, <i>Admiralty, Spring Gardens, S.W.</i>
1877	Miller, Robert Ferguson, <i>Ramsden-square, Barrow-in-Furness.</i>
1879	Miller, William, <i>67, Queen Victoria-street, E.C.</i>
1888	Mills, Sir Charles, K.C.M.G., C.B., <i>7, Albert Mansions, Victoria-street, S.W.</i>
1889	Mills, Major Henry Farnsby, <i>Junior United Service Club, Charles-street, S.W.</i>
1892	Milner, Alfred, <i>Inland Revenue Office, Somerset House, Strand, W.C.</i>
1882	Milnes, Alfred, M.A., <i>22a, Goldhurst-terrace, S. Hampstead, N.W.</i>
1874	*Mocatta, Frederick D., F.R.G.S., <i>9, Connaught-place, W.</i>
1878	Moffat, Robert J., <i>Bank House, Cambridge.</i>
1888	*Molloy, William R. J., M.E.I.A. (National Education Board), <i>17, Brookfield-terrace, Donnybrook, Dublin.</i>
1879	Moore, Alfred, C.E., <i>Queen's Chambers, 2, Ridgfield, Manchester.</i>
1887	Moore, Arthur Chisholm, <i>23, Essex-street, Strand, W.C.</i>
1874	Moore, Charles Rendall, <i>137, Brockley-road, Lewisham-road, S.E.</i>
1878	*Moore, John Byers Gunning, <i>Loymount, Cookstown, Ireland.</i>
1893	Morgan, Percy Charlton, <i>5, Victoria-street, S.W.</i>
1874	*Morris, James, M.D., F.R.C.S., <i>13, Somers-place, Hyde-park-square, W.</i>
1888	Morris, John (17, Throgmorton-avenue, E.C.), <i>34, Hyde-park-square, W.</i>
1891	Morrison, Rev. William Douglas, <i>6, Heathfield-road, Wandsworth-common, S.W.</i>
1885	*Mosley, Tonman, <i>Bangors, Iver, Uxbridge.</i>
1847	*MOUAT, FREDERIC JOHN, M.D., F.R.C.S., LL.D. (Honorary Vice-President), <i>12, Durham-villas, Kensington, W.</i>
1886	Mowbray, Robert Gray Cornish, M.P. <i>10, Little Stanhope-street, S.W.</i>
1886	Moxon, Thomas B., <i>Manchester and County Bank Limited, Manchester.</i>
1889	Muir, Robert, jun., <i>Clydesdale, Wolseley-road, Crouch-end, N.</i>

Year of Election.	
1883	Muirhead, Henry James, <i>Oakwood, Farquhar-road, Upper Norwood, S.E.</i>
1880	Mulhall, Michael George, <i>Standard Office, Buenos Ayres.</i>
1890	Mumby, Bonner Harris, M.D., <i>Portsmouth.</i>
1878	*Mundella, The Right Hon. Anthony John, M.P., F.R.S., <i>16, Elvaston-place, Queen's-gate, S.W.</i>
1891	Murphy, Shirley Foster, M.R.C.S., <i>22, Endsleigh-street, Tavistock-square, W.C.</i>
1878	Murray, Adam, <i>Hazeldean, Kersal, Manchester.</i>
1890	Musgrave, James, <i>Brookland, Heaton, Bolton.</i>
1892	Naoroji, Dadabhai, M.P., <i>National Liberal Club, S.W.</i>
1888	Narraway, W. F., <i>Crooms Hill House, Greenwich, S.E.</i>
1889	Nash, William, M.D., M.R.C.S. (Brigade-Surgeon), <i>18, Victoria-street, S.W.</i>
1878	*Nathan, Henry, <i>Dashwood House, New Broad-street, E.C.</i>
1854	Neild, Alfred, <i>Mayfield Print Works, Manchester.</i>
1869	NEISON, FRANCIS GUSTAVUS PAULUS, F.I.A., <i>93, Adelaide-road, South Hampstead.</i>
1877	Nevill, Charles Henry, <i>11, Queen Victoria-street, E.C.</i>
1862	Newbatt, Benjamin, F.I.A., F.R.G.S., <i>15, St. James's-square, S.W.</i>
1883	Newmarch, Mrs. Elizabeth, <i>Mulnath, 5, Harrold-road, Upper Norwood, S.E.</i>
1889	Newsholme, Arthur, M.D., <i>15, College-road, Brighton.</i>
1889	Newton, Henry William (Alderman), <i>2, Ellison-place, Newcastle-on-Tyne.</i>
1878	Nicholson, Professor J. Shield, M.A., D.Sc., <i>University of Edinburgh.</i>
1858	Nightingale, Miss Florence, <i>10, South-street, Park-lane, W.</i>
1877	Nix, Samuel Dyer, F.C.A., <i>3, King-street, Cheapside, E.C.</i>
1871	*Noble, Benjamin, F.R.A.S., <i>North-Eastern Bank, Newcastle-on-Tyne.</i>

Year of
Election.

- 1883 Norfolk, J. Ernest Walter,
- 1877 Norman, H.E. General Sir Henry Wylie, K.C.B., G.C.M.G.
(*Governor of Queensland*), *Brisbane, Queensland.*
- 1878 Northbrook, The Right Hon. the Earl of, G.C.S.I., D.C.L.,
4, *Hamilton-place, Piccadilly, W.*
- 1878 Notthafft, Theodor,
St. Petersburg Int. Commercial Bank, St. Petersburg.
- 1888 Oakley, Sir Henry (*General Manager, G.N.R.*),
37, *Chester-terrace, Regent's-park, N.W.*
- 1891 Oates, John, F.S.A.A.,
10, *Saltoun-road, Brixton, S.W.*
- 1893 O'Connor, Vincent C. Scott (*Assistant Comptroller,*
Currency Office, Rangoon, Burma.
- 1884 Odgers, William Blake, LL.D.,
4, *Elm-court, Temple, E.C.; & Fitzjohn's-avenue, N.W.*
- 1880 *Oelsner, Isidor,
- 1862 Ogbourne, Charles Henry, A.I.A.
29, *Dalhousie-square, Calcutta.*
- 1885 Ogle, William, M.A., M.D., F.R.C.P., &c.,
General Register Office, Somerset House, W.C.
- 1885 *Oldham, John,
River Plate Telegraph Company, Montevideo.
- 1884 Oldroyd, Mark, M.P.,
Hyrstlands, Dewsbury, Yorkshire.
- 1892 ONSLOW, THE RIGHT HON. THE EARL OF, G.C.M.G.,
7, *Richmond-terrace, S.W.*
- 1878 Oppenheim, Henry,
16, *Bruton-street, Bond-street, W.*
- 1877 Ormond, Richard,
24, *Grainger-street West, Newcastle-on-Tyne.*
- 1889 Oung, Moung Hla,
45, *Lansdowne-row, Calcutta.*
- 1887 Owen, Evan F., A.I.A.,
Office of Government Statist, Melbourne, Victoria.

Year of Election.	
1887	*Page, Edward D., (<i>Box 3382,</i> <i>c/o Faulkner, Page, & Co., New York City, U.S.A.</i>)
1886	Pain, James, <i>St. Mary's-street, Ely.</i>
1866	*Palgrave, Robert Harry Inglis, F.R.S., <i>Belton, Great Yarmouth, Norfolk.</i>
1879	Palmer, George, J.P., <i>The Acacias, Reading.</i>
1884	Palmer, Joseph Thomas <i>8, Wine Office-court, Fleet-street, E.C.</i>
1887	Pankhurst, Richard Marsden, LL.D. (<i>5, New-inn-square, W.C.</i>), <i>10, St. James's-square, Manchester.</i>
1888	Pannell, William Henry, <i>Library-chambers, Basinghall-street, E.C.</i>
1878	Park, David Francis. C.A., F.F.A., A.I.A., <i>39, Lombard-street, E.C.</i>
1887	Parker, Archibald, <i>Camden-wood, Chislehurst, Kent.</i>
1878	Parry, Thomas, <i>Grafton-place, Ashton-under-Lyne.</i>
1879	Partridge, Henry Francis, L.D.S., &c., <i>Sussex House, Sussex-place, South Kensington, S.W.</i>
1883	Paterson, John, <i>1, Walbrook, E.C.</i>
1888	Pattullo, James Durie, <i>31, St. Swithin's-lane, E.C.</i>
1877	Paul, Henry Moncreiff, <i>12, Lansdowne-crescent, Notting-hill, W.</i>
1878	Paulin, David, <i>6, Forres-street, Edinburgh.</i>
1893	Payne, Alexander William, A.C.A., <i>70, Finsbury-pavement, E.C.</i>
1884	*Peace, Walter, C.M.G., <i>21, Finsbury-circus, E.C.</i>
1857	*Pearson, Professor Charles Henry, M.A., <i>34, Harrington-gardens, S.W.</i>
1880	*Pease, Sir Joseph Whitwell, Bart., M.P., <i>Hutton Hall, Gisborough, Yorks.</i>
1876	*Peek, Sir Henry William, Bart., <i>Wimbledon House, Surrey.</i>
1886	Pembroke, The Right Hon. the Earl of, <i>Wilton House, Salisbury.</i>
1880	Pender, Sir John, G.C.M.G., M.P., <i>18, Arlington-street, S.W.; 50, Old Broad-street, E.C.</i>
1891	Penn-Lewis, William, <i>8, Halford-road, Richmond, Surrey.</i>
1887	Percival, William, <i>Constitutional Club, S.W.</i>
1888	Perratt, William Henry, A.I.A., <i>193, The Grove, Hammersmith, W.</i>

Year of Election.	
1890	Peters, John Wyatt, <i>The Gables, Grove-road S., Southsea.</i>
1883	Petheram, Frederick William, F.C.A., <i>61, Gracechurch-street, E.C.</i>
1886	Peto, Sir Henry, Bart., M.A., <i>Fleet House, Weymouth.</i>
1887	Phelps, Major-General Arthur, <i>23, Augustus-road, Edgbaston, Birmingham.</i>
1886	*Phelps, The Rev. Lancelot Ridley, M.A., <i>Oriel College, Oxford.</i>
1874	Phené, John Samuel, LL.D., F.S.A., <i>32, Oakley-street, S.W.</i>
1879	Philips, Herbert, <i>35, Church-street, Manchester.</i>
1877	Phillipps, Henry Matthews,
1887	Phillips, Charles H., J.P. (<i>Registrar-General of Trinidad</i>), <i>Court House, Port of Spain, Trinidad.</i>
1883	Phillips, John Orwell, <i>Horseferry-road, Westminster, S.W.</i>
1871	*Pickering, John, F.R.G.S., F.S.A., <i>86, Thicket-road, Anerley, S.E.</i>
1885	Pierrard, Paul, <i>24 Coleman-street, E.C.</i>
1878	*Pim, Joseph Todhunter, <i>Rinnamara, Monkstown, County Dublin.</i>
1886	Pink, J. Francis, <i>62, Chandos-street, Strand, W.C.</i>
1890	PITTAR, THOMAS J., <i>H.M. Custom House, E.C.</i>
1879	Pixley, Francis William, <i>23, Linden-gardens, W.</i>
1881	Planck, Charles, M.R.C.S. (<i>Deputy Surgeon-General</i>), <i>Allahabad, India.</i>
1883	Platt, James, <i>Rookwood, Hampstead, N.W.</i>
1861	LOWDEN, SIR WM. CHICELE, K.C.S.I. (<i>5, Park-cres., Port-land-place, W.</i>); <i>Aston Rowant House, Tetsworth, Oxon.</i>
1869	Pochin, Henry Davis, J.P., <i>Bodnant Hall, Eglwysbach, R.S.O., Denbighshire.</i>
1888	Pollard, James, J.P. <i>Chamber of Commerce, Edinburgh.</i>
1884	Polson, John, <i>West Mount, Paisley, N.B.</i>
1891	Pope, Henry Richard, <i>Beresford Manor, Plumpton, Lewes.</i>
1891	Potter, Henry, <i>Folkestone Villa, Elm-grove, Peckham, S.E.</i>
1879	*POWELL, SIR FRANCIS SHARP, Bart., M.P. (<i>Horton Old Hall, Bradford</i>), <i>1, Cambridge-square, Hyde Park, W.</i>

Year of Election.	
1888	Powell, James Heslop, 17, <i>Gracechurch-street, E.C.</i>
1871	Power, Edward, 6, <i>Crosby-square, E.C.</i>
1877	*Prance, Reginald Heber, <i>Frognaal, Hampstead, N.W.</i>
1877	Praschkauer, Maximilian, 109, <i>Fenchurch-street, E.C.</i>
1867	*Pratt, Robert Lindsay, 80, <i>Bondgate, Darlington.</i>
1887	*PRICE, L. L., M.A., <i>Oriel College, Oxford.</i>
1877	PRICE-WILLIAMS, RICHARD, M.INST.C.E., 32, <i>Victoria-street, S.W.</i>
1887	Probyn, Leslie Charles, 79, <i>Onslow-square, S.W.</i>
1889	Probyn, Major Clifford, 55, <i>Grosvenor-street, Grosvenor-square, W.</i>
1884	*Proctor, William, 89, <i>Corporation-street, Manchester.</i>
1886	Provand, Andrew Dryburgh, M.P., 2, <i>Whitehall-court, Westminster, S.W.</i>
1871	Puleston, Sir John Henry, 2, <i>Bank-buildings, Princes-street, E.C.</i>
1886	Pulley, Sir Joseph, Bart., 90, <i>Piccadilly, W.</i>
1885	Purvis, Gilbert, <i>Ingle Neuk, Brackley-road, Beckenham, Kent.</i>
1874	Quain, Sir Richard, Bart., M.D., F.R.S., F.R.C.P., 67, <i>Harley-street, W.</i>
1888	Quirk, William Henry, 9, <i>Gracechurch-street, E.C.</i>
1883	Rabbidge, Richard, F.C.A., 32, <i>Poultry, E.C.</i>

Year of Election.	
1872	*Rabino, Joseph (<i>Chief Manager</i>), <i>Imperial Bank of Persia, Teheran</i> ,
1888	*Radcliffe, Sir David, J.P., <i>Thurstaston Hall, near Birkenhead.</i>
1858	*Radstock, The Right Honourable Lord, <i>Mayfield, Woolston, Southampton.</i>
1888	Rae, George, <i>Redcourt, Birkenhead.</i>
1885	RAE, JOHN, M.A. (<i>Vice-President</i>), <i>15, Werter-road, Putney, S.W.</i>
1887	Raffalovich, His Excellency Arthur, <i>19, Avenue Hoche, Paris.</i>
1877	Raikes, Lieut.-Col. George Alfred, F.S.A., F.R. Hist. Soc., <i>63, Belsize-park, Hampstead, N.W.</i>
1860	Ramsay, Alexander Gillespie, F.I.A., <i>Canada Life Assurance Co., Hamilton, Canada West.</i>
1885	Randell, James S., <i>19, Alfred-street, Bath.</i>
1880	Rankin, James, M.P., <i>35, Ennismore-gardens, Prince's Gate, S.W.</i>
1881	Raper, Sir Robert George, <i>Chichester.</i>
1884	Raphael, Alfred, <i>87, Alexandra-road, N.W.</i>
1859	Rathbone, P. H., <i>Greenbank Cottage, Liverpool.</i>
1878	Rathbone, William, M.P., <i>18, Prince's-gardens, Prince's-gate, S.W.</i>
1884	*Ravenscroft, Francis, <i>Birkbeck Bank, Chancery-lane, W.C.</i>
1874	*Ravensstein, Ernest George, F.R.G.S., <i>91, Upper Tulse-hill, Brixton, S.W.</i>
1886	Rawlins, Frederick, <i>Southport, Queensland.</i>
1877	*Rawlins, Thomas, <i>45, King William-street, E.C.</i>
1835	RAWSON, SIR RAWSON W., K.C.M.G., C.B. (<i>Honorary Vice-President</i>), <i>68, Cornwall-gardens, Queen's-gate, S.W.</i>
1893	Rea, Charles Herbert Edmund, <i>223, Norwood-road, Herne Hill, S.E.</i>
1888	Read, Thomas William, <i>30, Castle-street, Liverpool.</i>
1890	Reade, Herbert, <i>24, Lower Sloane-street, Chelsea, S.W.</i>
1889	*Reed, Thomas, F.C.A., <i>63, King-street, South Shields.</i>
1888	Reid, Herbert Lloyd, <i>Ardentinney, Balham Park-road, Balham, S.W.</i>

Year of Election.	
1888	Rew, Robert Henry, 8, <i>Wharton-road, West Kensington, W.</i>
1886	Rhens, Robert, 20, <i>Fussett-square, Dalston, E.</i>
1888	Rhodes, George Webber, 131, <i>Wool Exchange, E.C.</i>
1879	Rhodes, John George, 46, <i>St. George's-road, S.W.</i>
1890	Richards, Fred., 29, <i>Northampton-square, E.C.</i>
1892	Richards, Westley, J.P., <i>Ashwell, Oakham, Rutland.</i>
1892	Richardson, Hubert,
1888	Richardson, J. H., 8, <i>Finch-lane, Cornhill, E.C.</i>
1891	Ridge, Samuel H., B.A., F.R.G.S., F.R. Hist. S. 257, <i>Victoria Parade, E. Melbourne, Victoria.</i>
1873	Ripon, The Most Hon. the Marquess of, K.G., F.R.S. &c., 9, <i>Chelsea Embankment, S.W.</i>
1892	Rivington, Francis Hansard, 44, <i>Connaught-square, W.</i>
1887	Roberts, Arthur Herbert, F.C.A., F.R.G.S., <i>Caledonian Chambers, St. Mary-street, Cardiff.</i>
1882	Roberts, Edward, F.R.A.S. (<i>Nautical Almanac Office</i>), 3, <i>Verulam-buildings, Gray's Inn, W.C.</i>
1890	Roberts, Sir William, M.D., F.R.S., 8, <i>Manchester-square, W.</i>
1885	Robertson, Thomas Stewart, 1, <i>Market-bldgs., Collins-street, W., Melbourne, Victoria.</i>
1887	Robinson, Henry James, <i>St. John's Villa, Woodlands, Isleworth, W.</i>
1886	Roechling, Herman A., A.M. Inst. C.E., 23, <i>Highfield-street, Leicester.</i>
1880	*Ronald, Byron L., 14, <i>Upper Phillimore-gardens, W.</i>
1873	*Rosebery, The Right Hon. the Earl of, LL.D., F.R.S., 38, <i>Berkeley-square, W.</i>
1892	Ross, Charles Edmonstone, <i>St. Thomé, Mylapore, Madras.</i>
1891	Ross, Frederick William Forbes, M.B., C.M., 147, <i>Victoria-road, New Brighton, Cheshire.</i>
1893	Rothwell, Richard Pennefather, 27, <i>Park-place, New York, U.S.A.</i>
1865	Ruck, George Thomas, <i>The Hawthorns, Dorville-road, Lee, S.E.</i>
1890	Ruffer, Marc Armand, M.A., M.D., B.Sc., 5, <i>York-terrace, Regent's-park, N.W.</i>
1888	Rusher, Edward Arthur, F.I.A., 142, <i>Holborn Bars, E.C.</i>

Year of Election.	
1886	Russell, Arthur B., A.C.A., 11, <i>Ludgate hill, E.C.</i> ; 16, <i>Dartmouth-park-road, N.W.</i>
1878	Russell, Richard F., 8, <i>John-street, Adelphi, W.C.</i>
1887	Russell, Thomas, C.M.G., 59, <i>Eaton-square, S.W.</i>
1890	Rutherford, Frederick William, 12, <i>King-street, Cheapside, E.C.</i>
1873	Rutherford-Elliott, J. G., <i>Elphinstone, Tyndall's Park-road, Clifton, Bristol.</i>
1873	*Salisbury, The Most Hon. the Marquess of, K.G., P.C., F.R.S., 20, <i>Arlington-street, W.</i>
1881	Salmon, James, <i>Tower Chambers, Finsbury Pavement, E.C.</i>
1875	*Salomons, Sir David Lionel, Bart., J.P., <i>Broom-hill, Tunbridge Wells.</i>
1876	Salt, Thomas, M.P., <i>Weeping Cross, Stafford.</i>
1892	Samuel, Charles, 176, <i>Sutherland-avenue, Harrow-road, W.</i>
1868	Samuelson, Sir Bernhard, Bart., M.P., F.R.S., 56, <i>Prince's-gate, Hyde-park, S.W.</i>
1888	Sandell, Edward, F.C.A., 181, <i>Queen Victoria-street, E.C.</i>
1889	Sandell, Frederic David, 181, <i>Queen Victoria-street, E.C.</i>
1891	Sarda, Pandit Har Bilas, B.A., M.R.A.S., <i>Government College, Ajmere, India.</i>
1886	Sauerbeck, Augustus, 4, <i>Moorgate-street-buildings, E.C.</i>
1893	Saunders, Cecil Roy, F.I. Inst., <i>Downs House, Eling, Hants.</i>
1877	Saunders, Charles Edward, M.D., <i>County Asylum, Hayward's Heath, Sussex.</i>
1852	Saunders, James Ebenezer, F.G.S., J.P., 9, <i>Finsbury-circus, E.C.</i>
1888	Sawyer, Lucian Willard, <i>Billiter-square Buildings, E.C.</i>
1887	*Searth, Leveson. M.A., <i>Keversstone, Manor-road, Bournemouth.</i>

Year of Election.	
1883	Schidrowitz, Samuel, 102, <i>Oxford-gardens, Notting-hill, W.</i>
1877	Schiff, Charles, 22, <i>Lowndes-square, S.W.</i>
1891	Schloss, David F., M.A., 1, <i>Knaresborough-place, Cromwell-road, S.W.</i>
1891	Schooling, John Holt, 19, <i>Abingdon-street, Westminster, S.W.</i>
1883	*Schwann, John Frederick, <i>Oakfield, Wimbledon, S.W., and 6, Moorgate-street, E.C.</i>
1892	Scotfield, Ernest Frank, B.A.,
1885	Scott, James Henry, <i>St. Mildred's House, Poultry, E.C.</i>
1885	Scott, Rev. John Davidson, M.A., <i>The Vicarage, Cholmondeley, Malpas.</i>
1888	Scottér, Charles (<i>General Manager, L. & S.W.R.</i>), <i>Waterloo Station, Waterloo-road, S.E.</i>
1887	Seaton, Edward, M.D., Lond., F.R.C.P., 56, <i>North-side, Clapham-common, S.W.</i>
1880	*Seeley, Charles, M.P., <i>Sherwood Lodge, Nottingham.</i>
1886	Seyd, Ernest J. F., 38, <i>Lombard-street, E.C.</i>
1873	Seyd, Richard, 38, <i>Lombard-street, E.C.</i>
1888	Shaw, James Charles, 35, <i>Leinster-gardens, Hyde Park, W.</i>
1879	Shepherd, Wallwyn Poyer Burnett, M.A., 15, <i>Old Square, Lincoln's-inn, W.C.</i>
1885	Sherwin, Joseph Henry, 16, <i>Whitehall-place, S.W.</i>
1888	Shillcock, Joshua, B.A., <i>Bank of England, West Branch, Burlington-gardens, W.</i>
1888	Shuttleworth, Thomas G., <i>Queen's Insurance-buildings, Church-street, Sheffield.</i>
1871	Sidgwick, Professor Henry, M.A., <i>Trinity College, Cambridge.</i>
1886	Silver, Stephen William, 3, <i>York-gate, Regent's-park, N.W.</i>
1878	Simmonds, G. Harvey, 1, <i>Whitehall, S.W.</i>
1892	*Sinclair, Captain John, M.P., 101, <i>Mount-street, Berkeley-square, W.</i>
1850	Singer, Charles Douglas, <i>Silverton, Silver-street, Enfield Town.</i>
1893	Sitta, Professore Dottor Pietro, <i>Corso Giovecca No. 84, Ferrara, Italy.</i>
1886	Sitwell, Sir George Reresby, Bart., M.P., J.P., <i>Renishaw Hall, Chesterfield.</i>

Year of Election.	
1882	Skinner, Charles Weeding, <i>Hill Crest, Theydon Bois, Essex.</i>
1881	Skrine, Francis Henry B., J.P., <i>c/o Messrs. King, Hamilton, and Co., Calcutta, India.</i>
1888	Slade, Alfred Thomas, <i>Wardrobe-chambers, Queen Victoria-street, E.C.</i>
1888	Slade, Francis William, <i>17, Victoria-street, Westminster, S.W.</i>
1883	Sly, Richard Stevens, F.R.G.S., <i>Fern Villa, Queen's-road, New Cross Gate, S.E.</i>
1869	Smee, Alfred Hutcheson, M.R.C.S., <i>The Grange, Wallington, Surrey.</i>
1886	*Smith, Arthur Manley, <i>29, Lincoln's Inn-fields, W.C.</i>
1878	*Smith, Charles, M.R.I.A., F.G.S., Assoc. Inst. C.E., <i>c/o Dr. Gilbert, F.R.S., Harpenden, St. Albans.</i>
1893	*Smith, James McLaren Stuart, B.A., F.R.G.S., F.R.S.L., <i>3, Elm-court, Temple, E.C.</i>
1883	*Smith, The Hon. Sir Donald A., K.C.M.G., LL.D., <i>1157, Dorchester-street, Montreal, Canada.</i>
1871	Smith, E. Cozens, <i>1, Old Broad-street, E.C.</i>
1889	Smith, George Armitage, M.A., <i>26, Regent's Park-road, N.W.</i>
1878	*Smith, George, LL.D., C.I.E., <i>Serampore House, Napier-road, Edinburgh.</i>
1888	Smith, H. Llewellyn, B.A., B.Sc. <i>49, Beaumont-square, E.</i>
1877	Smith, Howard S., A.I.A., F.F.A. <i>37, Bennett's Hill, Birmingham.</i>
1878	*Smith, James, <i>South Indian Railway, Trichinopoly, Madras Presidency.</i>
1891	Smith, James Parker, M.P., <i>Jordanhill, Partick, N.B.</i>
1877	Smith, John, <i>8, Old Jewry, E.C.</i>
1883	Smith, Samuel, M.P., <i>7, Delahay-street, Westminster, and Reform Club, S.W.</i>
1890	Smith, William Alexander, J.P., <i>21, Castlereagh-street, Sydney, New South Wales.</i>
1888	Smith, Walter J., <i>19, West Smithfield, E.C.</i>
1887	Suell, Arthur Henry, <i>27, Mincing-lane, E.C.</i>
1855	Sowray, John Russell, <i>2, Princes-mansions, Victoria-street, S.W.</i>
1889	Spackman, J. Woolsey, <i>Clare Bank, Sevenoaks.</i>
1889	Speirs, Edwin Robert, <i>8, Theobalds-road, W.C.</i>

Year of
Election.

- 1867 *Spencer, Robert James,
175, *King's-road, Southsea.*
- 1892 Spender, John Alfred, M.A.,
29, *Cheyne-walk, S.W.*
- 1883 Spicer, Albert,
50, *Upper Thames-street, E.C.*
- 1856 *Sprague, Thomas Bond, M.A., F.I.A.,
26, *St. Andrew-square, Edinburgh.*
- 1872 Spriggs, Joseph,
Foxton, near Market Harborough.
- 1882 Stack, Thomas Neville, *Crosby-bldgs., Crosby-square, E.C.,*
1, *St. Andrew-st., Dublin.*
- 1889 Stanton, Arthur G.,
13, *Rood-lane, E.C., & 70, Granville-park, Blackheath, S.E.*
- 1877 Staples, Sir Nathaniel Alexander, Bart.,
Lissan, Cookstown, Tyrone, Ireland.
- 1880 Stark, James,
17, *King's Arms-yard. E.C.*
- 1880 Stephens, William Davies, J.P.,
4, *Abbotsford-terrace, Newcastle-on-Tyne.*
- 1882 *Stern, Edward D.,
4, *Carlton-house-terrace, S.W.*
- 1885 Stevens, Marshall,
Highfield House. Urmston, near Manchester.
- 1877 Stone, William Alfred,
90, *Cannon-street, E.C.; Hayton, Bramley Hill, Croydon.*
- 1889 Stow, Harry Vane,
National Liberal Club, Whitehall-place, S.W.
- 1865 Strachan, Thomas Young, F.I.A.,
18, *Sylvan-road, Upper Norwood.*
- 1872 Strachey, General Richard. R.E., C.S.I., F.R.S.,
69, *Lancaster-gate, W.*
- 1893 Strahan, Samuel Alexander Kenny, M.D.,
Berry Wood, Northampton.
- 1880 Strutt, Hon Frederick,
Milford House, near Derby.
- 1891 Stuart, Harold A.,
Baikie, Ootacamund, Madras Presidency, India.
- 1884 *Sugden, Richard,
The Farre Close, Brighouse, Yorkshire.
- 1881 Sykes, George Samuel,
1, *Grant's-lane, Calcutta, India.*

Year of Election	
1859	*Tait, Patrick Macnaghten, F.R.G.S., 37, <i>Charlotte-street, Portland-place, W.</i>
1889	Tarling, Charles, <i>Stoneleigh House, Warltersville-road, Crouch-hill, N.</i>
1889	Tattersall, William, <i>Hazelwood, Hale, Cheshire.</i>
1889	Taylor, Stephen Seaward (Alderman), 151, <i>Brixton-road, S.W.</i>
1887	Taylor, R. Whately Cooke, 8, <i>Spencer-road, Coventry.</i>
1888	*Taylor, Theodore Cooke, J.P., <i>Sunny Bank, Batley, Yorkshire.</i>
1893	Teece, Richard, F.I.A., F.F.A., c/o <i>H. S. King & Co., 65, Cornhill, E.C.</i>
1884	Tempany, Thomas William, F.R.H.S., 25, <i>Bedford-row, W.C.</i>
1888	Temperley, William Angus, jun., 2, <i>St. Nicholas-buildings, Newcastle-on-Tyne.</i>
1890	Tenney, John, <i>Exchequer and Audit Department, Somerset House, W.C.</i>
1891	Terrey, William, <i>Sheffield Water Department, Sheffield.</i>
1888	Theobald, John Wilson, 75, <i>Palmerston-buildings, E.C.</i>
1889	Thodey, William Henry, 479, <i>Collins-street, Melbourne, Victoria.</i>
1888	Thomas, David Alfred, M.P., <i>Llanwern, near Newport, Mon.</i>
1887	Thomas, John, 18, <i>Wood-street, E.C.</i>
1879	Thomas, W. Cave, 8, <i>Fitzroy-street, Fitzroy-square, W.</i>
1864	*Thompson, Henry Yates, 26a, <i>Bryanston-square, W.</i>
1868	Thomson, James, 35, <i>Nicholas-lane, E.C.</i>
1871	Thomson, Thomas D., 57, <i>Moorgate-street, E.C.</i>
1890	Thring, The Right Hon. Lord, K.C.B., 5, <i>Queen's Gate-gardens, S.W.</i>
1882	Tinker, James, <i>Hordlecliff, Lymington, Hants.</i>
1879	Tipping, William, <i>Oakfield House, Ashton-under-Lyne.</i>
1889	Touch, George Alexander, 47, <i>Goldhurst-terrace, N.W.</i>
1868	*Treatt, Frank Burford, J.P., <i>Fermount, Bellenger River, New South Wales.</i>
1868	Tritton, Joseph Herbert, 54, <i>Lombard-street, E.C.</i>

Year of Election.	
1892	Trobridge, Arthur, <i>Bloxedge House, Langley Green, near Birmingham.</i>
1887	Tunley, George, <i>3, Foley-avenue, Hampstead, N.W.</i>
1878	Turnbull, Alexander, <i>118, Belsize park-gardens, N.W.</i>
1890	*Turner, Rev. Harward, B.Sc., F.R.M.S., <i>27, Quai d'Austerlitz, Paris.</i>
1885	Turner, William, <i>Board of Trade, Cardiff.</i>
1892	Tyler, Edgar Alfred, <i>72, King William-street, E.C.</i>
1841	Tyndall, William Henry, F.I.A., <i>Morlands, Oxford-road, Redhill.</i>
1893	Tyrer, Thomas, F.I.C., F.C.S., <i>Stirling Chemical Works, Stratford, E.</i>
1877	*Urlin, Richard Denny, <i>22, Stafford-terrace, Phillimore-gardens, W.</i>
1888	Van Raalte, Marcus, <i>22, Austin Friars, E.C.</i>
1884	Veevers, Richard, <i>Woningworth, Fulwood-park, Preston.</i>
1890	Venn, John, D.Sc., F.R.S. (<i>Caius College, Cambridge</i>), <i>Chine-crescent-road, Bournemouth.</i>
1889	Venning, Charles Harrison, <i>22, Great George-street, S.W.</i>
1888	Verdin, William Henry, J.P., <i>Winsford, Cheshire.</i>
1886	Vernon, The Right Hon. Lord, <i>Sudbury Hall, Derby.</i>
1876	Vigers, Robert, <i>4, Frederick's-place, Old Jewry, E.C.</i>
1885	Vincent, Frederick James, A.I.A., <i>38, Queen's-road, South Hornsey, N.</i>
1877	Vine, Sir John Richard Somers, C.M.G., <i>6, Adelphi-terrace, W.C.</i>
1890	Walford, Ernest L., <i>2, Shorter's-court, E C</i>

Year of
Election.

- 1890 Walkley, William Henry,
Ingoldsthorp, St. John's-villas, Upper Holloway, N.
- 1868 Wallis, Charles James,
97, Ridgmount-gardens, W.C.
- 1880 Wallis, E. White,
49, Clifton-hill, St. John's Wood, N.W.
- 1888 Walmsley, Frederic,
49, Hanging Ditch, Manchester.
- 1876 Walter, Arthur Fraser,
Finchampstead, Wokingham, Berks.
- 1850 Walter, John,
40, Upper Grosvenor-street, W.
- 1879 Wansey, Arthur H.,
Sambourne, Stoke Bishop, Bristol.
- 1893 Ward, William Cullen,
12, Wynyard-square, Sydney, N.S.W.
- 1888 Warren, Reginald Augustus, J.P.,
Preston-place, near Worthing.
- 1888 Wartnaby, William Wade,
Market Harborough, Leicestershire.
- 1886 Waters, Alfred Charles,
General Register Office, Somerset House, Strand, W.C.
- 1865 Waterhouse, Edwin, B.A., A.I.A., F.C.A.,
44, Gresham-street, E.C.
- 1892 Wates, C. Marshall,
17, Radford-road, Lewisham, S.E.
- 1883 Watson, T. Wilkinson,
183, West George-street, Glasgow.
- 1883 Watson, William Livingstore,
7, Wetherby-gardens, South Kensington, S.W.
- 1885 *Watt, William,
17, Queen's-road, Aberdeen.
- 1888 Webb, Henry Barlow,
7, Warrior-square-terrace, St. Leonards-on-Sea.
- 1893 Weedon, Thornhill,
Hawthorne-street, Woolloongabba, Brisbane, Queensland.
- 1873 *Welby, Sir Reginald Earle, K.C.B.,
The Treasury, Whitehall, S.W.
- 1874 Welch, Charles, F.S.A., Guildhall, E.C. (*Representing the Library Committee of the Corporation of the City of London.*)
- 1890 Weller, William Hamilton,
Roseleigh, Tolworth, near Surbiton, Surrey.
- 1889 Wells-Smith, Henry, A.C.A.,
8, Norfolk-row, Sheffield.
- 1855 Welton, Thomas Abercrombie,
Rectory Grove House, Clapham, S.W.
- 1879 Wenley, James Adams,
Bank of Scotland, Bank-street, Edinburgh.
- 1879 *Westlake, John, Q.C., LL.D.,
The River House, 3, Chelsea Embankment, S.W.

Year of Election.	
1882	*Whadcoat, John Henry, F.C.A., 18, <i>Highbury-crescent, N.</i>
1883	*Whadcoat, William Edward, 54, <i>Carleton-road, Tufnell-park, N.</i>
1878	Wharton, James, <i>Edgehill, Netherhall-gardens, Fitz John's-avenue, N.W.</i>
1887	Whinney, Frederick, 8, <i>Old Jewry, E.C.</i>
1859	Whitbread, Samuel, M.P., 10, <i>Ennismore-gardens, Princes-gate, S.W.</i>
1887	*White, The Rev. George Cecil, M.A., <i>Nursling Rectory, Southampton.</i>
1863	White, Leedham, 25, <i>Cranley-gardens, South Kensington, S.W.</i>
1871	White, William, 23, <i>Wynell-road, Forest-hill, S.E.</i>
1888	Whitehead, Sir James, Bart., M.P., J.P., D.L. (Alderman), 9, <i>Cambridge-gate, Regent's-park, N.W.</i>
1892	Whitelegge, Benjamin A., M.D., <i>St. John's, Wakefield.</i>
1884	Whiteley, William, <i>Westbourne-grove, Bayswater, W.</i>
1879	*Whitwill, Mark, J.P., <i>Bristol.</i>
1884	Wightman, Charles, 1, <i>Fenchurch-avenue, E.C.</i>
1888	Wilkinson, James H.,
1893	Wilkinson, Rev. John Frome, M.A., <i>Kilvington, Orston, Nottingham.</i>
1875	Wilkinson, Thomas Read, <i>Manchester and Salford Bank, Manchester.</i>
1860	Willans, John Wrigley, <i>Mercury Office, Leeds.</i>
1864	Williams, Frederick Bessant, 46, <i>Leicester-square, W.C.</i>
1881	*Williams, Henry Maunder, 186, <i>New Cross-road, S.E.</i>
1870	Williams, Henry Reader, 6, <i>Lime-street, E.C., and The Priory, Hornsey, N.</i>
1888	*Williams, Robert, Jun., 20, <i>Birchin-lane, E.C.</i>
1888	Williamson, John W., 5, <i>Stone-buildings, Lincoln's Inn, W.C.</i>
1888	Wills, John Tayler, B.A., F.R.G.S., 273, <i>Vauxhall-bridge-road, S.W.</i>
1891	Wilson, Henry Joseph, M.P., <i>Osgathorpe Hills, Sheffield.</i>
1884	Wilson, James (Deputy Commissioner), <i>Shahpur, Panjab, India.</i>

Year of
Election

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| 1874 | *Wilson, Robert Porter,
5, <i>Cumberland-terrace, Regent's-park, N.W.</i> |
| 1890 | Winter, Alexander, |
| 1884 | Wishart, G. D.,
8, <i>Livingstone-avenue, Sefton-park, Liverpool.</i> |
| 1887 | Woodhouse, Coventry Archer,
30, <i>Mincing-lane, E.C.</i> |
| 1888 | Woolfe, Thomas Rodriques, A.C.A.,
65, <i>Watling-street, E.C.</i> |
| 1890 | Woolcombe, Robert Lloyd, LL.D., F.I. Inst., M.R.I.A.,
14, <i>Waterloo-road, Dublin.</i> |
| 1890 | Worroll, Charles,
<i>Colonial Mutual Life Office, Adderley-street, Cape Town.</i> |
| 1878 | Worsfold, Rev. John Napper, M.A.,
<i>Haddlesey Rectory, near Selby, Yorkshire.</i> |
| 1887 | Worthington, A. W., B.A.,
<i>Old Swinford, Stourbridge.</i> |
| 1880 | Wren, Walter, M.A.
7, <i>Powis-square, W.</i> |
| | |
| 1886 | Yerburgh, Robert Armstrong, M.P.,
27, <i>Princes Gate, S.W.</i> |
| 1888 | *Yglesias, Miguel,
2, <i>Tokenhouse-buildings, E.C.</i> |
| 1877 | *Youll, John Gibson,
<i>Jesmond-road, Newcastle-on-Tyne.</i> |

*** The Executive Committee request that any inaccuracy in the foregoing list may be pointed out to the ASSISTANT SECRETARY, and that all changes of address may be notified to him, so that delay in forwarding communications and the publications of the Society may be avoided.

HONORARY FELLOWS.

HIS ROYAL HIGHNESS THE PRINCE OF WALES, K.G..

Honorary President.

Argentine Republic.

Year of
Election.

1890. **Buenos Ayres..** DR. FRANCISCO LATZINA, Director General of Statistics; Doctor *honoris causa* of the Faculty of Physical and Mathematical Sciences of the University of Cordoba; Knight of the Italian Order of S.S. Maurice and Lazare; Officer of the Academy of France; Member of the National Academy of Sciences, of the International Statistical Institute, of the Geographical and Statistical Societies of Paris, of the Society of Commercial Geography of Paris, and Corresponding Member of the National Historical Academy of Venezuela.

Austria and Hungary.

1890. **Vienna** DR. KARL THEODOR VON INAMA-STEP-NEGG, Doctor of Political Economy; President of the Imperial and Royal Central Statistical Commission; Professor at the University of Vienna.
1893. **Budapest** Dr. JOSEPH DE JEKELFALUSSY, Doctor *Juris*; Advocate; Chief of the Royal Hungarian Statistical Bureau; Ministerial Councillor; Knight of the Order of Francis Joseph; Second Vice-President of the Royal Hungarian Statistical Council; External Member of the Committee of Examiners for Political Sciences; Corresponding Member of the Hungarian Academy of Sciences.
1893. **Vienna** Dr. FRANZ RITTER VON JURASCHEK, Doctor *Juris et Philosophiæ*; "K.K. Regierungsrath"; Member and Secretary of the Imperial and Royal Central Statistical Commission; Professor at the University of Vienna; Professor of Public Law and of Statistics at the Military Academies, Vienna; Knight of the Austrian Order of the Iron Crown (3rd Class); Officer of the Order of the Crown of Italy; Member of the Permanent Commission for Commercial Values; of the International Statistical Institute; and of the British Economic Association.

Year of
Election.

1893. **Budapest** JOSEPH KÖRÖSI, Director of the Municipal Statistical Bureau of Budapest; *Docent* at the University of Budapest; President of the Municipal Statistical Committee; Knight of Several Orders; Member of the Statistical Commissions of Hungary, Belgium, and Nijni-Novgorod; Honorary Member of the American Statistical Associations; Member of the Hungarian Academy of Science, of the International Statistical Institute, of the Statistical Societies of Manchester and Paris, of the British Economic Association, and of several other learned Societies.
1877. **Vienna** MAX WIRTH, Economist; formerly Director of the Federal Statistical Bureau of Switzerland; Co-Editor of the "Neue Freie Presse."

Belgium.

1879. **Brussels** DR. EUGÈNE JANSSENS, Doctor of Medicine; Chief Inspector of the Board of Health of the City of Brussels; President of the Federal Committee of Health of the Brussels District; Member of the Central Statistical Commission, of the Superior Council of Health, of the Royal Academy of Medicine, and of the Local Medical Commission; Officer of the Belgian Order of Leopold and of the Italian Order of SS. Maurice and Lazare; Knight of the French Legion of Honour; Civic Cross of the 1st Class; Officer of the Academy of France; Associate of the Statistical Society of Paris and of the International Statistical Institute.

China.

1890. **Peking** SIR ROBERT HART, Baronet, G.C.M.G., LL.D., Inspector-General of Imperial Maritime Customs, China.

Denmark.

1878. **Copenhagen** .. VIGAND ANDREAS FALBE - HANSEN
Professor of Political Economy at the University of Copenhagen.
1852. " .. DR. PETER ANTON SCHLEISNER, Doctor of Medicine, State Councillor; Knight and Bachelor of the Order of the "Dannebrog," and Knight of the Swedish Order of the North Star; President of the Royal Danish Institute of Vaccination; Member of the Royal Danish General Board of Health.

France.

Year of
Election.

1880. **Paris**..... DR. JACQUES BERTILLON, Doctor of Medicine; Chief of the Statistical Department of the City of Paris; Member of the Superior Council of Statistics; of the Consultative Committee of Public Hygiene of France; and of the Statistical Society of Paris, &c.
1856. ,, MAURICE BLOCK, Knight of the Legion of Honour, and of Orders of Sweden, Russia, Prussia, Bavaria, Austria-Hungary, Greece, Italy, Spain, and Portugal; Member of the Institute of France, of the Superior Council of Statistics, of the International Statistical Institute, of the Society of Political Economy of Paris, and of many Academies and Scientific Societies.
1879. ,, DR. ARTHUR CHERVIN, Doctor of Medicine and Surgery; Director of the Paris Institute for Stammerers; Member of the Superior Council of Statistics and of the International Statistical Institute, &c.
1878. ,, MAXIMIN DELOCHE, Honorary Director of the General Statistics of France; Commander of the Legion of Honour; Officer of the Order of Public Instruction; Commander of the Austrian Order of Francis Joseph; Member of the Institute of France, and of several learned societies.
1890. ,, ALFRED DE FOVILLE, Master of the Mint; Professor at the National Conservatoire of Arts and Trades (Chair of Industrial Economy and Statistics); Officer of the Legion of Honour; Laureate of the Institute of France; Past President of the Statistical Society of Paris; Member of the International Statistical Institute and of the Superior Council of Statistics.
1870. ,, DR. CLÉMENT JUGLAR, Member of the Institute of France; Past President of the Statistical Society of Paris; Vice-President of the Society of Political Economy of Paris.
1860. ,, PIERRE ÉMILE LEVASSEUR, Member of the Institute of France; Professor at the College of France and at the Conservatoire of Arts and Trades; President of the Statistical Commission for Primary Instruction; Past President of the Statistical Society of Paris; Vice-President of the International Statistical Institute, of the Superior Council of Statistics, and of the Society of Political Economy, &c.

Year of
Election.**France—Contd.**

1880. **Paris** JEAN BAPTISTE LÉON SAY, Deputy; Ex-Minister of Finance; Member of the Institute of France; President of the Society of Political Economy of Paris; Past President of the Statistical Society of Paris, of the National Society of Horticulture, and of the National Society of Agriculture.
1887. „ DANIEL WILSON, Deputy; Ex-Under-Secretary of State; Past President of the Statistical Society of Paris.
1876. „ THE PRESIDENT (for the time being) OF THE STATISTICAL SOCIETY OF PARIS.

Germany.

1871. **Stuttgart** SIR HENRY PAGE-TURNER BARRON, Baronet, C.M.G., late British Minister-Resident to the King of Wurttemberg.
1878. **Oldenburg** DR. KARL BECKER, “Wirklicher Geheimer Ober-Regierungsrath”; late Director of the Imperial Statistical Bureau of the German Empire; Honorary Doctor of the University of Tübingen; Corresponding Member of the Central Statistical Commission of Belgium; Honorary Member of the Geographical and Statistical Society of Frankfurt, of the Statistical Society of Switzerland, and of the International Statistical Institute, Associate of the Statistical Society of Paris.
1890. **Berlin** KARL JULIUS EMIL BLENCK, “Geheimer Ober-Regierungsrath”; Director of the Royal Statistical Bureau of Prussia, also Member of the Prussian Central Statistical Commission and of the Central Board of Control of the Survey of Prussia; Honorary Member or Member of several learned Societies.
1854. **Dresden** DR. ERNST ENGEL, “Geheimer Ober-Regierungsrath”; formerly Director of the Royal Statistical Bureau of Prussia; Member of several learned Societies.
1877. **Strassburg** .. DR. GEORG VON MAYR, Ex-Under Secretary of State in the Imperial Ministry for Alsace-Lorraine; formerly Director of the Royal Statistical Bureau of Bavaria; Honorary Member of the International Statistical Institute; Associate of the Statistical Society of Paris.
1893. **Berlin** DR. FRIEDRICH WILHELM HANS VON SCHEEL, “Kaiserlicher Geheimer Regierungsrath”; Doctor *Juris et philosophiæ*; Director of the Imperial Statistical Bureau of the German Empire; formerly Professor of Political Economy and Statistics at the University of Bern; Honorary Member of the Statistical and Social Inquiry Society of Ireland.

Year of
Election.**Germany—Contd.**

1860. **Munich** DR. GEORG KARL LEOPOLD SEUFFERT,
formerly Chief Inspector and Director of the Royal
Custom-House at Simbach; Knight of the Bavarian
Order of St. Michael 1st Class.
1876. **Frankfort** THE PRESIDENT (for the time being) OF THE
GEOGRAPHICAL AND STATISTICAL
SOCIETY OF FRANKFORT.

Italy.

1879. **Rome** DR. GEROLAMO BOCCARDO. Senator; Councillor
of State; Doctor of Laws; late Professor at the
University and at the Superior Naval School of
Genoa; Grand Officer of the Orders of SS. Maurice
and Lazare, and of the Crown of Italy; Knight
of the Order of Civil Merit of Savoy; Member of
the Academy "dei Lincei," of the Academy of
Naples, of the Institutes of Science of Milan,
Venice, and Palermo; of the Cobden Club, of the
International Statistical Institute, of the Academy
of Madrid, and of the Deputation of National
History, &c.
1874. **Rome** DR. LUIGI BODIO, Doctor of Laws; Professor
of Industrial Legislation and of Statistics at the
Engineering College, Rome; Director-General of
the Statistical Department of the State; Grand
Officer of the Order of SS. Maurice and Lazare;
Knight of the Order of Civil Merit of Savoy;
Correspondent of the Institute of France (Academy
of Moral and Political Sciences).
1880. **Pavia** DR. LUIGI COSSA, LL.D.; Professor of Political
Economy; Commander of the Order of the Crown
of Italy; Officer of the Order of SS. Maurice and
Lazare; Member of the Cobden Club; Honorary
Member of the American Economic Association;
Ordinary Member of the Academy "dei Lincei"
and of the Royal Institute of Sciences of Milan;
Correspondent of the Royal Academies of Lisbon,
Modena, Turin, Naples, &c.
1845. **Venice** FRANCESCO FERRARA. Senator; Professor and
Director of the Royal Superior School of Commerce
at Venice; late Minister of Finance; Member of
the Academy "dei Lincei."
1880. **Rome** ANGELO MESSEDAGLIA, Senator; Professor of
Statistics at the Royal University of Rome;
Member of the Academy "dei Lincei."
1868. **,,** THE MARQUIS ERMENEGILDO DEI CINQUE
QUINTILI, Advocate; General Secretary of the
Hospitals Commission of Rome.

Netherlands.

Year of
Election.

1893. **The Hague** DR. VERKERK WILLIAM ARNOLD PETER
PISTORIUS, Director of the Statistical Bureau
of the Department of Finance ; Director General
of Direct Taxation, Customs and Excise.

Russia.

1873. **St. Petersburg** HIS EXCELLENCY PIERRE SEMENOFF
(SEMENOW), Senator ; Privy Councillor to
His Imperial Majesty ; President of the Imperial
Statistical Council ; President of the Imperial
Geographical Society ; Honorary Member of the
Academy of Sciences in St. Petersburg ; Associate
of the Statistical Society of Paris.
1890. ,, HIS EXCELLENCY NICOLAS TROÏNITSKY,
Former Governor ; Privy Councillor ; Director of
the Central Statistical Committee of the Ministry
of the Interior ; Life Member of the Statistical
Council ; Member of the Imperial Geographical
Society of Russia, of the International Statistical
Institute, and of the Statistical Society of Paris.

Spain.

1845. **Madrid**..... HIS EXCELLENCY SEÑOR DON JOSÉ
MAGAZ Y JAYME, Advocate, Gentleman of His
Majesty's Chamber, and Member of the Council
of State ; Ex-Deputy of the Cortes ; Ex-Senator ;
Ex-Director-General of Treasury ; Ex-Under-
Secretary of the Ministry of Finance ; Grand Cross
of the Order of Isabella Catolica ; Commander of
the Order of Carlos 3°.

Sweden and Norway.

1858. **Christiania**.... DR. THORKIL HALVORSEN ASCHEHOUG,
Doctor of Laws ; Professor of Political Economy
at the University of Christiania ; Assessor Extra-
ordinary of the Supreme Court of Norway ; Com-
mander of the First Class of the Norwegian Order
of St. Olave, of the Swedish Order of the North
Star ; and of the Danish Order of the " Danne-
brog" ; Corresponding Member of the Institute of
France ; Member of the Institute of International
Law, of the International Statistical Institute, and
of the Academies of Christiania, Stockholm,
Trondhjem and Upsala, also of the Royal Historical
Society of Denmark.
1874. ,, .. ANDERS NICOLAI KLÆR, Director of the Central
Statistical Bureau of Norway ; Associate of the
Statistical Society of Paris.
1860. ,, .. THOMAS MICHELL, Esq., C.B., Her Majesty's
Consul-General for Norway.

Year of
Election.

1890. **Stockholm** DR. ELIS SIDENBLADH., Ph.D., Director in Chief of the Central Statistical Bureau of Sweden; President of the Royal Statistical Commission; Commander, Officer, and Knight of several Swedish and Foreign Orders; Member of the Royal Academies of Sciences and of Agriculture, at Stockholm; Honorary and Corresponding Member of several foreign learned Societies.

Switzerland.

1890. **Bern** DR. LOUIS GUILLAUME, Doctor of Medicine; Director of the Federal Statistical Bureau; Secretary of the International Penitentiary Commission.

United States.

1873. **Albany, N.Y. ..** THE HON. WILLIAM BARNES, Lawyer; Ex-Superintendent of the Insurance Department, State of New York.
1881. **Washington ..** DR. JOHN SHAW BILLINGS, A.M., M.D., LL.D., Edinburgh and Harvard; D.C.L., Oxon; Surgeon, U.S. Army; Member of the National Academy of Sciences, &c.
1890. **New York** DR. RICHMOND MAYO-SMITH, M.A., Ph.D., Professor of Political Economy and Social Science in Columbia College; Vice-President of the American Statistical Association; Member of the International Statistical Institute, and of the National Academy of Sciences.
1870. **Taunton, Mass.** THE HON. JOHN ELIOT SANFORD, Lawyer; Ex-Speaker of the House of Representatives; Ex-Insurance Commissioner; Ex-Chairman of the Board of Harbour and Land Commissioners; Chairman of the Board of Railroad Commissioners.
1876. **Boston, Mass. ..** DR. FRANCIS AMASA WALKER, Ph.D., LL.D., formerly Superintendent of the United States Census; President of the Massachusetts Institute of Technology; Member of the International Statistical Institute and "Président Adjoint" for the Meeting of 1893; Correspondent of the Institute of France; President of the American Statistical Association; Ex-President of the American Economic Association; Vice-President of the National Academy of Sciences, Washington; Corresponding Member of the Central Statistical Commission of Belgium.

Year of
Election.

1870. **Norwich, Conn.** THE HON. DAVID AMES WELLS, D.C.L., LL.D., M.D., Economist. Late Special Commissioner of Revenue of the United States; Chairman of Commission for the Revision of Taxes of the State of New York; Lecturer on the Principles and Practice of Taxation, Harvard University, Cambridge, United States; Member of the Board of Arbitration of American Railways; President, National Board of Visitors of the U.S. Military Academy of West Point; President of the American Social Science Association, and of the American Free Trade League; Chairman in 1883 of the Department of Finance of the American Social Science Association; Corresponding Member of the Institute of France, to fill vacancy occasioned by the death of John Stuart Mill; Corresponding Member of the Academy "dei Lincei" Rome; Member of the American Academy of Arts and Sciences, Boston; Honorary Member of the Cobden Club; Gold Medallist "Exposition Universelle, France, 1889, Groupe de l'Economie Sociale."
1893. **Washington...** CARROLL DAVIDSON WRIGHT, Commissioner of the U.S. Department of Labour; late Chief of the Massachusetts Bureau of Statistics of Labour President of the Association for the promotion of Profit Sharing; late President and now Vice-President of the American Social Science Association; Vice-President of the American Statistical Association; Member of the American and British Economic Associations, of the International Statistical Institute, and of several other learned Societies.

India.

1886. **Calcutta and Simla** JAMES EDWARD O'CONOR, Esq., C.I.E., Assistant Secretary with the Supreme Government, India, Department of Finance and Commerce.

Dominion of Canada.

1876. **Toronto** JOHN LANGTON, Esq., M.A., late Auditor-General.
1877. **Windsor, Nova Scotia** DR. EDWARD YOUNG, A.M., Ph.D., Consul of the United States, formerly Chief of the Bureau of Statistics, United States of America; Member of the Geographical Society of Paris.

New South Wales.

Year of
Election.

1893. **Sydney** TIMOTHY AUGUSTINE COGHLAN, Government Statistician of New South Wales and Registrar of Friendly Societies and Trade Unions; formerly Assistant Engineer for Harbours and Rivers.
1876. ,, EDWARD GRANT WARD, Esq., J.P., Registrar-General; Chairman of Board of Land Titles Commissioners.

New Zealand.

1876. **Wellington** SIR JAMES HECTOR, K.C.M.G., M.D., F.R.S.S., L. and E., F.G.S., &c. Director of the Geological Survey, of the Meteorological Department, and of the New Zealand Institute, &c.

Tasmania.

1876. **Hobart** EDWIN CRADOCK NOWELL, Esq., J.P., Clerk of Executive and Legislative Councils of Tasmania; late Government Statistician; Clerk to the Federal Council of Australasia in its four Sessions.

Victoria.

1875. **Melbourne** HENRY HEYLYN HAYTER, Esq., C.M.G., Government Statist of Victoria; Officer of the French Order of Public Instruction; Chevalier of the Order of the Crown of Italy; Honorary Member of the Statistical and Social Inquiry Society of Ireland, of the Statistical Association of Tokio, of the Royal Society of Tasmania, of the Trinity Historical Society of Texas, and of the Intercolonial Medical Congress of Australasia; Honorary Corresponding Member of the Society of Arts, London, of the Statistical Society of Manchester, of the American Statistical Association, Boston, of the Commercio-Geographical Society of Berlin, of the Geographical Society of Bremen, and of the Royal Society of South Australia; Honorary Fellow of the Royal Colonial Institute; Honorary Foreign Member of the Statistical Society of Paris; Representative Member for Victoria of the International Statistical Institute.
1858. ,, WILLIAM HENRY ARCHER, Esq., K.S.G., F.I.A., F.L.S., &c., Barrister-at-Law.

Great Britain and Ireland.

Year of
Election.1876. **Manchester** .. THE PRESIDENT (for the time being) OF THE
MANCHESTER STATISTICAL SOCIETY.1876. **Dublin** THE PRESIDENT (for the time being) OF THE
STATISTICAL AND SOCIAL INQUIRY
SOCIETY OF IRELAND.

NOTE.—The Executive Committee request that any inaccuracies in the foregoing List of HONORARY FELLOWS may be pointed out, and that all changes of address may be notified to the Secretary, so that delay in forwarding communications and the publications of the Society may be avoided.

ROYAL STATISTICAL SOCIETY.

Copy of Charter.

Victoria, by the Grace of God of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith.

To all to whom these Presents shall come, Greeting:—

Whereas Our Right trusty and entirely beloved cousin, Henry, Third Marquess of Lansdowne, Knight of the Most Noble Order of the Garter, Charles Babbage, Fellow of the Royal Society, John Elliott Drinkwater, Master of Arts, Henry Hallam, Fellow of the Royal Society, the Reverend Richard Jones, Master of Arts, and others of Our loving subjects, did, in the year One thousand eight hundred and thirty-four, establish a Society to collect, arrange, digest and publish facts, illustrating the condition and prospects of society in its material, social, and moral relations; these facts being for the most part arranged in tabular forms and in accordance with the principles of the numerical method, and the same Society is now called or known by the name of “The “Statistical Society.”

And Whereas it has been represented to Us that the same Society has, since its establishment, sedulously pursued such its proposed objects, and by its publications (including those of its transactions), and by promoting the discussion of legislative and other public measures from the statistical point of view, has greatly contributed to the progress of statistical and economical science.

And Whereas distinguished individuals in foreign countries, as well as many eminent British subjects, have availed themselves of the facilities offered by the same Society for communicating important information largely extending statistical knowledge; and the general interest now felt in Statistics has been greatly promoted and fostered by this Society.

And Whereas the same Society has, in aid of its objects, collected a large and valuable library of scientific works and charts, to which fresh accessions are constantly made; and the said Society has hitherto been supported by annual and other subscriptions and contributions to its funds, and has lately acquired leasehold premises in which the business of the said Society is carried on.

And Whereas in order to secure the property of the said Society, to extend its operations, and to give it its due position among the Scientific Institutions of Our kingdom, We have been besought to grant to Sir Rawson William Rawson, Knight Com-

mander of the Most Distinguished Order of St. Michael and St. George, and Companion of the Most Honourable Order of the Bath, and to those who now are Members of the said Society, or who shall from time to time be elected Fellows of the Royal Statistical Society hereby incorporated, Our Royal Charter of Incorporation for the purposes aforesaid.

1. **Now Know Ye** that We, being desirous of encouraging a design so laudable and salutary, of Our especial grace, certain knowledge and mere motion, have willed, granted, and declared and Do by these Presents, for Us, Our heirs and successors, will, grant, and declare that the said Sir Rawson William Rawson, Knight Commander of the Most Distinguished Order of St. Michael and St. George, and Companion of the Most Honourable Order of the Bath, and such other of Our loving subjects as now are Members of the said Society, or shall from time to time be elected Fellows of "The Royal Statistical Society" hereby incorporated according to such regulations or bye laws as shall be hereafter framed or enacted, and their successors, shall for ever hereafter be by virtue of these presents one body politic and corporate, by the name of "**The Royal Statistical Society,**" and for the purposes aforesaid, and by the name aforesaid, shall have perpetual succession and a common seal, with full power and authority to alter, vary, break, and renew the same at their discretion, and by the same name to sue and be sued, implead and be impleaded, answer and be answered, unto and in every Court of Us, Our heirs and successors.

2. **The** Royal Statistical Society, in this Charter hereinafter called "The Society," may, notwithstanding the statutes of mortmain, take, purchase, hold and enjoy to them and their successors a hall, or house, and any such messuages or hereditaments of any tenure as may be necessary, for carrying out the purposes of the Society, but so that the yearly value thereof to be computed at the rack rent which might be gotten for the same at the time of the purchase or other acquisition, and including the site of the said hall, or house, do not exceed in the whole the sum of Two thousand pounds.

3. **There** shall be a Council of the Society, and the said Council and General Meetings of the Fellows to be held in accordance with this Our Charter shall, subject to the provisions of this Our Charter, have the entire management and direction of the concerns of the Society.

4. **There** shall be a President, Vice-Presidents, a Treasurer or Treasurers, and a Secretary or Secretaries of the Society. The Council shall consist of the President, Vice-Presidents, and not

less than twenty Councillors; and the Treasurer or Treasurers and the Secretary or Secretaries if honorary.

5. **The** several persons who were elected to be the President, Vice-Presidents, and Members of the Council of the Statistical Society at the Annual Meeting held in the month of June, One thousand eight hundred and eighty-six, shall form the first Council of the Society, and shall continue in office until the first Election of officers is made under these presents as hereinafter provided.

6. **General** Meetings of the Fellows of the Society may be held from time to time, and at least one General Meeting shall be held in each year. Every General Meeting may be adjourned, subject to the provisions of the Bye Laws. The following business may be transacted by a General Meeting, viz.:—

- (a.) The Election of the President, Vice-Presidents, Treasurer or Treasurers, Secretary or Secretaries, and other Members of the Council of the Society.
- (b.) The making, repeal, or amendment of Bye Laws.
- (c.) The passing of any proper resolution respecting the affairs of the Society.

7. **Bye Laws** of the Society may be made for the following purposes, and subject to the following conditions, viz.:—

- (a.) For prescribing the qualification and condition of tenure of office of the President; the number, qualifications, functions, and conditions of tenure of office of the Vice-Presidents, Treasurers, Secretaries, and Members of Council, and Officers of the Society; for making regulations with respect to General Meetings and Meetings of the Council and proceedings thereat, and for the election of any persons to be Honorary Fellows or Associates of the Society, and defining their privileges (but such persons, if elected, shall not be Members of the Corporation), and for making regulations respecting the making, repeal and amendment of Bye Laws, and generally for the government of the Society and the management of its property and affairs.
- (b.) The first Bye Laws shall be made at the first General Meeting to be held under these presents, and shall (amongst other things) prescribe the time for holding the first election of officers under these presents.

8. **The** General Meetings and adjourned General Meetings of the Society shall take place (subject to the rules or bye laws of the Society, and to any power of convening or demanding a

Special General Meeting thereby given) at such times and places as may be fixed by the Council.

9. **The** existing rules of the Statistical Society, so far as not inconsistent with these presents, shall be in force as the Bye Laws of the Society until the first Bye Laws to be made under these presents shall come into operation.

10. **Subject** to these presents and the Bye Laws of the Society for the time being, the Council shall have the sole management of the income, funds, and property of the Society, and may manage and superintend all other affairs of the Society, and appoint and dismiss at their pleasure all salaried and other officers, attendants, and servants as they may think fit, and may do all such things as shall appear to them necessary or expedient for giving effect to the objects of the Society.

11. **The** Council shall once in every year present to a General Meeting a report of the proceedings of the Society, together with a statement of the receipts and expenditure, and of the financial position of the Society, and every Fellow of the Society may, at reasonable times to be fixed by the Council, examine the accounts of the Society.

12. **The** Council may, with the approval of a General Meeting, from time to time appoint fit persons to be Trustees of any part of the real or personal property of the Society, and may make or direct any transfer of such property so placed in trust necessary for the purposes of the trust, or may, at their discretion, take in the corporate name of the Society conveyances or transfers of any property capable of being held in that name. Provided that no sale, mortgage, incumbrance, or other disposition of any hereditaments belonging to the Society shall be made unless with the approval of a General Meeting.

13. **No** Rule, Bye Law, Resolution, or other proceeding shall be made or had by the Society, or any meeting thereof, or by the Council, contrary to the general scope or true intent and meaning of this Our Charter, or the laws or statutes of Our Realm, and anything done contrary to this present clause shall be void.

In witness whereof We have caused these Our Letters to be made Patent.

Witness Ourself, at Westminster, the thirty-first day of January, in the fiftieth year of Our Reign.

By Warrant under the Queen's Sign Manual,

(L. S.)

MUIR MACKENZIE.

ROYAL STATISTICAL SOCIETY.

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RULES AND BYE-LAWS OF THE ROYAL STATISTICAL SOCIETY.

Objects of the Society.

1. The objects of the Royal Statistical Society are to collect, arrange, digest and publish facts, illustrating the condition and prospects of society in its material, social and moral relations; these facts being for the most part arranged in tabular forms and in accordance with the principles of the numerical method.

The Society collects new materials, condenses, arranges, and publishes those already existing, whether unpublished or published in diffuse and expensive forms in the English or in any foreign language, and promotes the discussion of legislative and other public measures from the statistical point of view. These discussions form portions of the published Transactions of the Society.

Constitution of the Society.

2. The Society consists of Fellows and Honorary Fellows, elected in the manner hereinafter described.

Number of Fellows and Honorary Fellows.

3. The number of Fellows is unlimited. Foreigners or British subjects of distinction residing out of the United Kingdom may be admitted as Honorary Fellows, of whom the number shall not be more than seventy at any one time.

Proposal of Fellows.

4. Every Candidate for admission as a Fellow of the Society shall be proposed by two or more Fellows, who shall certify from their personal knowledge of him or of his works, that he is a fit person to be admitted a Fellow of the Society. Every such certificate having been read and approved of at a Meeting of the Council, shall be suspended in the office of the Society until the following Ordinary Meeting, at which the vote shall be taken.

Election of Fellows.

5. In the election of Fellows, the votes shall be taken by ballot. No person shall be admitted unless at least sixteen Fellows vote, and unless he have in his favour three-fourths of the Fellows voting.

Admission of Fellows.

6. Every Fellow elect is required to take the earliest opportunity of presenting himself for admission at an Ordinary Meeting of the Society.

The manner of admission shall be thus:—

Immediately after the reading of the minutes, the Fellow elect, having first paid his subscription for the current year or his composition, shall sign the obligation contained in the Fellowship-book, to the effect following:—

“We, who have underwritten our names, do hereby undertake, each for himself, that we will endeavour to further the good of the Royal Statistical Society for improving Statistical Knowledge, and the ends for which the same has been founded; that we will be present at the Meetings of the Society as often as conveniently we can, and that we will keep and fulfil the Bye-laws and Orders of this Society: provided that whensoever any one of us shall make known, by writing under his hand, to the Secretaries for the time being, that he desires to withdraw from the Society, he shall be free thenceforward from this obligation.”

Whereon the President, taking him by the hand, shall say,—“By the authority, and in the name of the Royal Statistical Society, I do admit you a Fellow thereof.”

Upon their admission Fellows shall have the right of attaching to their names the letters F.S.S., but not in connection with any trading or business advertisement other than the publication of any book or literary notice.

Admission of Honorary Fellows.

7. There shall be Two Meetings of the Society in the year, on such days as shall be hereafter fixed by the Council, at which Honorary Fellows may be elected.

No Honorary Fellow can be recommended for election but by the Council. At any Meeting of the Council any Member thereof may propose a Foreigner or British subject of distinction residing out of the United Kingdom, delivering at the same time a written statement of the qualifications of, offices held by, and published works of, the person proposed; and ten days' notice at least shall be given to every Member of the Council, of the day on which the Council will vote by ballot on the question whether they will recommend to the Society the election of the person proposed. No such recommendation to the Society shall be adopted unless at least three-fourths of the votes are in favour thereof.

Notice of the recommendation shall be given from the chair at the Meeting of the Society next preceding that at which the vote shall be taken thereon. No person shall be elected an Honorary Fellow unless sixteen Fellows vote and three-fourths of the Fellows voting be in his favour.

The Council shall have power to elect as Honorary Fellows, the Presidents for the time being of the Statistical Societies of Dublin, Manchester, and Paris, and the President of any other Statistical Society at home or abroad.

Payments by Fellows.

8. Every Fellow of the Society shall pay a yearly subscription of Two Guineas, or may at any time compound for his future yearly payments by paying at once the sum of Twenty Guineas.*

Defaulters.—Withdrawal of Fellows.

9. All yearly payments are due in advance on the 1st of January, and if any Fellow of the Society have not paid his subscription before the 1st of July, he shall be applied to in writing by the Secretaries, and if the same be not paid

before the 1st of January of the second year, a written application shall again be made by the Secretaries, and the Fellow in arrear shall cease to receive the Society's publications, and shall not be entitled to any of the privileges of the Society until such arrears are paid; and if the subscription be not discharged before the 1st of February of the second year, the name of the Fellow thus in arrear shall be exhibited on a card suspended in the office of the Society; and if, at the next Annual General Meeting, the amount still remain unpaid, the defaulter shall, unless otherwise authorised by the Council, be announced to be no longer a Fellow of the Society, the reason for the same being at the same time assigned. No Fellow of the Society can withdraw his name from the Society's books, unless all arrears be paid; and no resignation will be deemed valid unless a written notice thereof be communicated to the Secretaries. No Fellow shall be entitled to vote at any Meeting of the Society until he shall have paid his subscription for the current year.

Expulsion of Fellows.

10. If any Fellow of the Society, or any Honorary Fellow, shall so demean himself that it would be for the dishonour of the Society that he longer continue to be a Fellow or Honorary Fellow thereof, the Council shall take the matter into consideration; and if the majority of the Members of the Council present at some Meeting (of which and of the matter in hand such Fellow or Honorary Fellow, and every Member of the Council, shall have due notice) shall decide by ballot to recommend that such Fellow or Honorary Fellow be expelled from the Society, the President shall at its next Ordinary Meeting announce to the Society the recommendation of the Council, and at the following Meeting the question shall be decided by ballot, and if at least three-fourths of the number voting are in favour of the expulsion, the President shall forthwith cancel the name in the Fellowship-book, and shall say,—

"By the authority and in the name of the Royal Statistical Society, I do

* Cheques should be made payable to "The Royal Statistical Society," and crossed "Messrs. Drummond and Co."

"declare that A. B. (naming him) is no longer a Fellow (or Honorary Fellow) thereof."

And such Fellow or Honorary Fellow shall thereupon cease to be of the Society.

Trustees.

11. The property of the Society may be vested in three Trustees, chosen by the Fellows. The Trustees are eligible to any other offices in the Society.

President, Council, and Officers.

12. The Council shall consist of a President and thirty Members, together with the Honorary Vice-Presidents.

From the Council shall be chosen four Vice-Presidents, a Treasurer, the Honorary Secretaries, and a Foreign Secretary, who may be one of the Honorary Secretaries. The former Presidents who are continuing Fellows of the Society shall be Honorary Vice-Presidents. Any five of the Council shall be a quorum.

Election of President and Officers.

13. The President, Members of Council, Treasurer, and Honorary and Foreign Secretaries shall be chosen annually by the Fellows at the Annual General Meeting.

The Vice-Presidents shall be chosen annually from the Council by the President.

The President shall not be eligible for the office more than two years in succession.

Six Fellows, at least, who were not of the Council of the previous year, shall be annually elected; and of the Members retiring three at least shall be those who have served longest continuously on the Council, unless they hold office as Treasurer or Honorary or Foreign Secretary.

Nomination of President, Council, and Officers.

14. The Council shall, previously to the Annual General Meeting, nominate, by ballot, the Fellows whom they recommend to be the next President and Council of the Society. They shall also recommend for election a Treasurer and the Secretaries (in accordance with

Rule 12). Notice shall be sent to every Fellow whose residence is known to be within the limits of the metropolitan post, at least a fortnight before the Annual General Meeting, of the names of Fellows recommended by the Council.

Extraordinary Vacancies.

15. On any extraordinary vacancy occurring of the Office of President, or other Officer of the Society, the Honorary Secretaries shall summon the Council with as little delay as possible, and a majority of the Council, thereupon meeting in their usual place, shall, by ballot, and by a majority of those present, choose a new President, or other Officer of the Society, to be so until the next Annual General Meeting.

Committees.

16. The Council shall have power to appoint Committees of Fellows and also an Executive Committee of their own body. The Committees shall report their proceedings to the Council. No report shall be communicated to the Society except by the Council.

Auditors.

17. At the first Ordinary Meeting of each year, the Fellows shall choose two Fellows, not being Members of the Council, as Auditors, who, with one of the Council, chosen by the Council, shall audit the Treasurer's accounts for the past year, and report thereon to the Society, which report shall be presented at the Ordinary Meeting in February. The Auditors shall be empowered to examine into the particulars of all expenditure of the funds of the Society, and may report their opinion upon any part of it.

Meetings Ordinary and General.

18. The Ordinary Meetings of the Society shall be held monthly, or oftener, during the Session, which shall be from the 1st of November to the 1st of July in each year, both inclusive, on such days and at such hours as the Council shall declare. The Annual General Meeting shall be held on such day in the month of June of each year as shall be appointed by the Council for the time being.

Business of Ordinary Meetings.

19. The business of the Ordinary Meetings shall be to elect and admit Fellows, to read and hear reports, letters, and papers on subjects interesting to the Society. Nothing relating to the bye-laws or management of the Society shall be discussed at the Ordinary Meetings, except that the Auditors' Report shall be presented at the Ordinary Meeting in February, and that the Minutes of the Annual General Meeting, and of every Special General Meeting, shall be submitted for confirmation at the next Ordinary Meeting after the day of such Annual or Special General Meeting. Strangers may be introduced to the Ordinary Meetings, by any Fellow, with the leave of the President, Vice-President, or other Fellow presiding at the Meeting.

Business of Annual General Meeting.

20. The business of the Annual General Meeting shall be to elect the Officers of the Society, and to discuss questions on its bye-laws and management. No Fellow or Honorary Fellow shall be proposed at the Annual General Meeting. No Fellow shall propose any alteration of the rules or bye-laws of the Society at the Annual General Meeting, unless after three weeks' notice thereof given in writing to the Council, but amendments to any motion may be brought forward without notice, so that they relate to the same subject as the motion. The Council shall give fourteen days' notice to every Fellow of all questions of which such notice shall have been given to them.

Special General Meetings.

21. The Council may, at any time, call a Special General Meeting of the Society when it appears to them necessary. Any twenty Fellows may require a Special General Meeting to be called, by notice in writing signed by them, delivered to one of the Secretaries, specifying the questions to be moved. The Council shall, within one week of such notice, appoint a day for such Special General Meeting, and shall give at least one week's notice of every Special General Meeting, and of the questions to be moved, to every Fellow

within the limits of the metropolitan post, whose residence is known. No business shall be brought forward at any Special General Meeting other than that specified in the notice convening the same.

Duties of the President.

22. The President shall preside at all Meetings of the Society, Council, and Committees which he shall attend, and in case of an equality of votes, shall have a second or casting vote. He shall sign all diplomas of admission of Honorary Fellows. He shall admit and expel Fellows and Honorary Fellows, according to the bye-laws of the Society.

Duties of the Treasurer.

23. The Treasurer shall receive all moneys due to, and pay all moneys owing by, the Society, and shall keep an account of his receipts and payments. No sum exceeding Ten Pounds shall be paid but by order of the Council, excepting always any lawful demand for rates or taxes. The Treasurer shall invest the moneys of the Society in such manner as the Council shall from time to time direct.

Duties of the Honorary Secretaries.

24. The Honorary Secretaries shall, under the control of the Council, conduct the correspondence of the Society; they or one of them shall attend all Meetings of the Society and Council, and shall duly record the Minutes of the Proceedings. They shall issue the requisite notices, and read such papers to the Society as the Council may direct.

Powers of the Vice-Presidents.

25. A Vice-President, whether Honorary or nominated, in the chair, shall act with the power of the President in presiding and voting at any Meeting of the Society or Council, and in admitting Fellows; but no Vice-President shall be empowered to sign diplomas of admission of Honorary Fellows, or to expel Fellows or Honorary Fellows. In the absence of the President and Vice-Presidents, any Member of Council may be called upon by the Fellows then present, to preside at an Ordinary or Council Meeting, with the same power as a Vice-President.

Powers of the Council.

26. The Council shall have control over the papers and funds of the Society, and may, as they shall see fit, direct the publication of papers and the expenditure of the funds, in accordance with the provisions of the Charter.

27. The Council shall be empowered at any time to frame Regulations not inconsistent with these bye-laws, which shall be and remain in force until the next Annual General Meeting, at which they shall be either affirmed or annulled; but no Council shall have power to renew Regulations which have once been disapproved at an Annual General Meeting.

28. The Council shall have the custody of the Common Seal. The Common Seal shall not be affixed to any instrument, deed, or other document, except by order of the Council and in the presence of at least two Members

of the Council, and in accordance with such other regulations as the Council shall from time to time prescribe. The fact of the seal having been so affixed shall be entered on the minutes of the Council.

29. No Dividend, Gift, Division, or Bonus in money shall be made by the Society, unto or between any of the Fellows or Members, except as herein-after provided.

30. The Council shall publish a Journal of the Transactions of the Society, and such other Statistical Publications as they may determine upon, and may from time to time pay such sums to Editors and their assistants, whether Fellows of the Society or not, as may be deemed advisable.

31. All communications to the Society are the property of the Society, unless the Council allow the right of property to be specially reserved by the Contributors.

REGULATIONS OF THE LIBRARY.

1. The Library and the Reading Room are open daily for the use of Fellows from 10 a.m. till 5 p.m., except on Saturdays, when they are closed at 2 p.m.

2. Fellows of the Society are permitted to take out Books on making personal application, or by letter addressed to the Librarian, all expenses for carriage being paid by the Fellows.

3. Fellows are not to keep any books longer than one month. Any Fellow detaining a book for more than a month shall not be permitted to take another from the Library until the book detained shall have been returned.

4. Scientific Journals and Periodicals are not circulated until the volumes are completed and bound.

5. Cyclopædias and works of reference are not circulated, but may be lent on the written order of an Honorary Secretary for a period not exceeding *seven* days. The Assistant Secretary or Librarian is allowed at his discretion to lend works of reference for a period not exceeding *three* days, reporting at the same time to the Honorary Secretaries. If works so lent be not returned within the specified time, the borrower shall incur a fine of one shilling per day per volume for each day they are detained beyond the time specified.

6. Any Fellow damaging or losing a book, either replaces the work, or pays a fine equivalent to its value.

7. Books taken from the shelves for reference, are *not* to be replaced, but must be laid on the Library table.

8. The Librarian shall report to the Council any infringement of these regulations, and lay upon the table at each regular Meeting (*a*) a List of any "Works of Reference" that may have been borrowed, and (*b*) a List of Books that have been out more than a month.

DONORS TO THE LIBRARY.

DURING THE YEAR 1893.

(a) Foreign Countries.

Argentine Republic—

General Statistical Bureau.
 National Health Department.
 Buenos Ayres, Municipal Statistical Bureau.
 Argentine Geographical Institute.

Austria and Hungary—

Central Statistical Commission.
 Ministry of Agriculture.
 Statistical Department of the Ministry of Commerce.
 Hungarian Statistical Bureau.
 Prague Statistical Bureau.

Belgium—

Bureau of General Statistics.
 Administration of Mines.
 Brussels Bureau of Hygiene.
 Royal Academy of Sciences.

Bulgaria. Statistical Bureau.*Chili.* Department of Commercial Statistics.*China—*

Imperial Maritime Customs.
 Royal Asiatic Society's Branch.

Denmark—

Royal Statistical Bureau.
 Political Economy Society.

Egypt—

Department of Public Health.
 Director-General of Customs.

Egypt—Contd.

Director-General of Post Office.
 Egyptian Institute, Cairo.

France—

Bureau of General Statistics.
 Director-General of Customs.
 French Labour Department.
 Ministry of Agriculture.
 " Commerce.
 " Finance.
 " Justice.
 " Public Works.
 Paris Statistical Bureau.
 Economiste Français, The Editor.
 Journal des Economistes, The Editor.
 Monde Economique, The Editor.
 La Réforme Sociale, The Editor.
 Rentier, Le, The Editor, Paris.
 Revue Bibliographique Universelle, The Editor, Paris.
 Revue d'Economie Politique, The Editor, Paris.
 Revue Géographique Internationale, The Editor, Paris.
 Statistical Society of Paris.
 Free School of Political Science.

Germany—

Imperial Health Bureau.
 Imperial Statistical Bureau.
 German Consul-General, London.
 Prussian Royal Statistical Bureau.
 Saxony Royal Statistical Bureau.
 Berlin Statistical Bureau.
 Frankfort Chamber of Commerce.
 " Statistical Bureau.

During the Year 1893—Contd.(a) **Foreign Countries—Contd.***Germany—Contd.*

Hamburg Statistical Bureau.
 Geographical and Statistical
 Society of Frankfort.
 Archiv für Soziale Gesetzgebung,
 &c., The Editor. Tübingen.
 Jahrbücher für Nationalökono-
 mie und Statistik, The Editor.
 Zeitschrift für Litteratur, &c.,
 The Editor.

Greece. Statistical Bureau.

Guatemala. Statistical Bureau.

Italy—

Director-General, Statistical De-
 partment of the State.
 Director-General of Agriculture.
 Director-General of Customs.
 Geographical Society of Italy.
 Economista, The Editor, Florence.
 Giornale degli Economisti, The
 Editor, Bologna.

Japan—

Bureau of General Statistics.
 Central Sanitary Bureau.
 Tokyo Statistical Society.
 „ The Prefect of.

Mexico. Statistical Bureau.

Netherlands—

Central Statistical Committee.
 Department of the Interior.
 Ministry of Commerce & Industry.
 Statistical Institute.

Paraguay. Statistical Bureau.

Roumania—

Statistical Bureau.
 National Roumanian League.

Russia—

Agricultural Department.
 Central Statistical Committee.
 Controller of the Empire.
 Customs Statistical Bureau.
 Ministry of Finance.
 Finland Geographical Society.

Servia. Statistical Bureau.

Spain—

Board of Customs.
 Director-General of Indirect
 Taxation.
 Geographical & Stat. Institute.
 Geographical Society of Madrid.

Sweden. Central Statistical Bureau.

Norway. Central Statistical Bureau.

Switzerland—

Federal Assurance Bureau.
 „ Statistical Bureau.
 „ Department of Customs.
 Geneva Public Library
 Statistical Society.
 Swiss Union of Commerce and
 Industry.

United States—

Bureau of American Republics.
 Bureau of Education.
 Bureau of Ethnology.
 Commissioner of Labor.
 Comptroller of the Currency.
 Department of Agriculture.
 „ of State.
 Director of the Mint.
 Interstate Commerce Commis-
 sion.
 Marine Hospital Service.
 Secretary of the Treasury.
 Secretary of the Interior.

During the Year 1893—Contd.(a) **Foreign Countries—Contd.***United States—Contd.*

Superintendent of Census.
 Surgeon-General, U. States Army.
 Statistical Bureau, Treasury.

California. Bureau of Labor
 Statistics.

Connecticut—

State Board of Health.
 Bureau of Labor Statistics.

Illinois. Bureau of Labor Sta-
 tistics.

Indiana. Bureau of Labor
 Statistics.

Iowa. Bureau of Labor Statistics.

Kansas—

Bureau of Labor Statistics.
 State Historical Society.

Maine. Bureau of Labor and In-
 dustrial Statistics.

Maryland. Bureau of Industrial
 Statistics.

Massachusetts—

Board of Arbitration.
 Board of Health, Lunacy, &c.
 Bureau of Statistics of Labor.

Michigan. Bureau of Labour and
 Industrial Statistics.

Minnesota. Bureau of Labor
 Statistics.

Missouri. Bureau of Labor Sta-
 tistics.

Nebraska. Bureau of Labor and
 Industrial Statistics.

New York State Library.

„ Bureau of Labor.

North Carolina. Bureau of Labor
 Statistics.

United States—Contd.

Ohio. Bureau of Labor Statistics.

Pennsylvania. Bureau of Industrial
 Statistics.

Wisconsin—

Commisr. of Labor Statistics.
 State Board of Health.

Bankers' Magazine, New York.

Bradstreet's Journal, New York.

Commercial and Financial Chron-
 icle of New York.

Employer and Employed, The
 Publisher.

Journal of Political Economy.

Journal of Social Science.

Political Science Quarterly, Co-
 lumbia College.

Quarterly Journal of Economics,
 The Editor, Boston.

Academy of Arts and Sciences.

Academy of Political and Social
 Science.

Actuarial Society of America.

Economic Association, Baltimore.

Geographical Society, New York.

Philosophical Soc. of Philadelphia.

Statistical Association, Boston.

Astor Library, New York.

Columbia College, New York.

Franklin Institute, Philadelphia.

Leland Stanford Jr. University.

Smithsonian Institution.

Yale University.

Uruguay. Statistical Bureau.

During the Year 1893—Contd.

(b) India, and Colonial Possessions.

India, British—

Census Commissioner.
 Finance and Commerce Depart.
 Lieutenant-Governor of Bengal.
 Indian Engineering, The Editor.
 Asiatic Society of Bengal.
 Bombay Branch of the Royal
 Asiatic Society.

Canada—

Department of Agriculture.
 The High Commissioner, London.
 Manitoba Agricultural Depart.
 Insurance and Finance Chronicle,
 The Editor, Montreal.
 Royal Society of Canada.

Cape of Good Hope—

Colonial Secretary.
 Director of the Census.
 Superintendent.-Gen. of Education.
 Port Elizabeth Chamber of Com-
 merce.

Ceylon—

Lieut.-Governor and Colonial Sec.
 The Supt. of Census.

*Jamaica. Registrar-General of.**Mauritius—*

H.E. The Governor of.
 The Colonial Secretary.

*Natal. Durban Chamber of Com-
merce.**New South Wales—*

Agent-General, London.
 Government Statist, Sydney.
 Director of Agriculture.

New Zealand—

Government Insurance Depart-
 ment.
 Registrar-General.
 Department of Mines.
 Labour Department.
 Colonial Museum, Wellington.
 New Zealand Institute.
 Wellington Harbour Board.

*Queensland. Registrar-General of.**Saint Lucia. Colonial Secretary.**South Australia—*

The Chief Secretary.
 The Government Statist.
 The Registrar-General.
 The Superintendent of Census.
 Public Library, &c., Adelaide.

*Straits Settlements. The Govern-
ment Secretary, Perak.**Tasmania—*

Government Statistician, Hobart.
 Royal Society of Tasmania.

Trinidad—

Registrar-General.
 Government Statist.

Victoria—

The Agent-General, London.
 Department of Mines.
 Government Statist.
 Royal Society of Victoria.
 Public Library, &c., Melbourne.

During the Year 1893—Contd.(c) **United Kingdom and its several Divisions.***United Kingdom—*

Admiralty Medical Department.
 Board of Agriculture.
 Army Medical Department.
 Army Veterinary Department.
 Board of Trade.
 British Museum.
 Customs, Commissioners of.
 Home Office.
 India Office.
 Local Government Board.
 Metropolitan Asylums Board.
 „ Fire Brigade.
 „ Police.
 Royal Mint.
 Woods, Forests, &c., H.M.

England—

Registrar-General of England.
 London County Council.
 London. Battersea, The Vestry Clerk.

England—Contd.

London. Board of Works for Wandsworth District.
 Birmingham Medical Officer.
 „ Library.
 „ City Treasurer.
 Liverpool Free Public Library.
 Manchester Free Public Library
 „ Medical Officer.

Ireland—

Registrar-General of Ireland.
 Dublin Commissioner of Police.

Scotland—

Registrar-General of Scotland.
 Edinburgh City Chamberlain.

Channel Islands, Guernsey: Guille-Allès Library.

(d) **Authors, &c.**

Acland, Rt. Hon. A. H. D., M.P.
 Ashley, Profesor W. J., Toronto.
 Atkinson, Fred., Esq., India.
 Back, F., Esq., Tasmania.
 Bagehot, Mrs., London.
 Bailey, W. F., Esq., Dublin.
 Baines, J. A., Esq., London.
 Becker, Dr. Charles, Berlin.
 Bertillon, Dr. J., Paris.
 Bickford-Smith, R. A. H., Esq.
 Biddle, Daniel, Esq., Kingston.
 Billings, Dr. J. S., Washington.
 Birt, W., Esq., London.
 Blackwood & Sons, Messrs.
 Blenck, Herr E., Berlin.
 Blomfield, Rear-Admiral R.M., Alexandria.
 Bockh, Dr. R., Berlin.

Bohmert, Dr. V., Dresden.
 Bodio, Professor Luigi, Rome.
 Boinet, A., Bey, Cairo.
 Bolles, Albert S., Esq., New York.
 Bonar, Dr. James, London.
 Booth, Charles, Esq., London.
 Borthewitsch, M. L. von Jena.
 Bosco, Signor A., Florence.
 Bourinot, J. G., Esq., C.M.G., LL.D.
 Boutcher, Mortimore, & Co., London.
 Bouteron, M. Ed., Cairo.
 Caillard, A., Esq., Cairo.
 Carpenter, H. S., Esq., London.
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(e) *Societies, &c. (British).*

Accountants & Auditors, Society of.	Cobden Club.
Actuaries, Institute of.	East India Association.
Anthropological Institute.	Friendly Society of Ironfounders.
Arts, Society of.	Glasgow Philosophical Society.
Bankers, Institute of.	Howard Association.
British Association.	Imperial Federation League.
„ Economic Association.	Imperial Institute.
„ Iron Trade Association.	International Statistical Institute
Chartered Accountants, Institute of.	Iron and Steel Institute.
Chemistry, Institute of.	Liverpool Lit. and Phil. Society.
Civil Engineers, Institution of.	London Chamber of Commerce.

During the Year 1893—Contd.(e) **Societies, &c. (British)—Contd.**

London Hospital.	Royal Med. and Chirurgical Society.
Manchester Lit. and Phil. Society.	„ Nat. Life Boat Institution.
„ Statistical Society.	„ Society, Edinburgh.
Mechanical Engineers, Institution of.	„ Society, London.
Middlesex Hospital.	„ United Service Institution.
Mitchell Library, Glasgow.	St. Bartholomew's Hospital.
Peabody Donation Fund.	Sanitary Institute of Great Britain.
Royal Agricultural Society.	Seamen's Hospital Society.
„ Asiatic Society.	Society for Propagation of the
„ College of Physicians.	Gospel in Foreign Parts.
„ College of Surgeons.	Statistical and Social Inquiry So-
„ Colonial Institute.	ciety of Ireland.
„ Geographical Society.	Surveyors' Institution.
„ Institution of Great Britain.	University College, London.
„ Irish Academy.	

(f) **Periodicals, &c. (British). The Editors of—**

Accountant, The, London.	Insurance Record, The, London.
Athenæum, The, London.	Invention.
Bankers' Magazine, The, London.	Investors' Monthly Manual, The.
British Trade Journal, The, London.	Iron and Coal Trades' Review, The.
Building Societies, &c., Gazette, The.	Machinery Market, The, London.
Commercial World, The, London.	Nature, London.
Economic Review, The, London.	Policy-Holder, The, Manchester.
Economist, The, London.	Review, The, London.
Fireman, The, London.	Sanitary Record, The, London.
Insurance and Banking Review.	Shipping World, The, London.
Insurance Post, The, London.	Statist, The, London.



